

FIG. 2
PRIOR ART

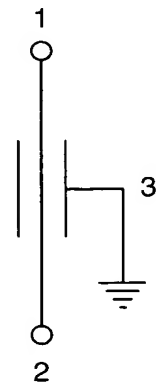


FIG. 3
PRIOR ART

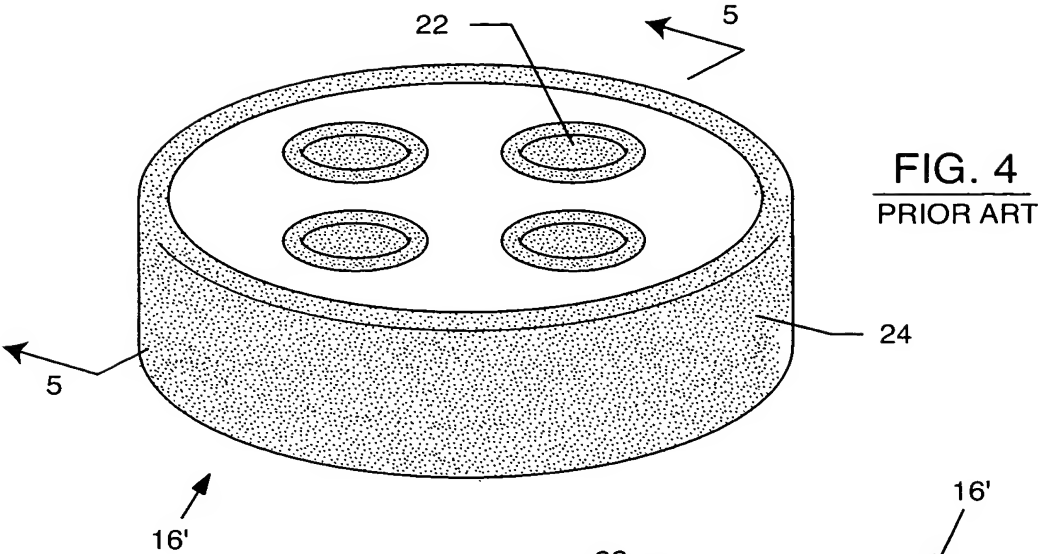


FIG. 5
PRIOR ART

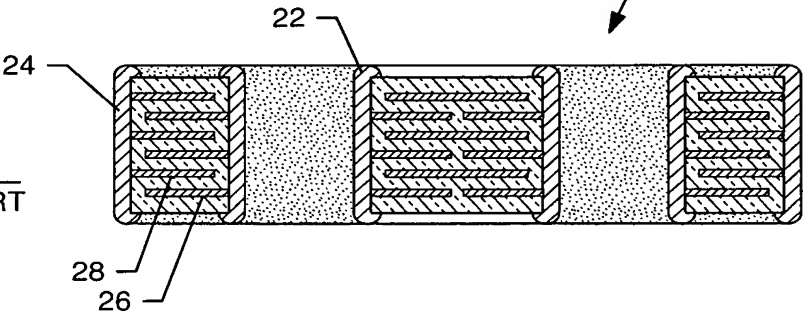
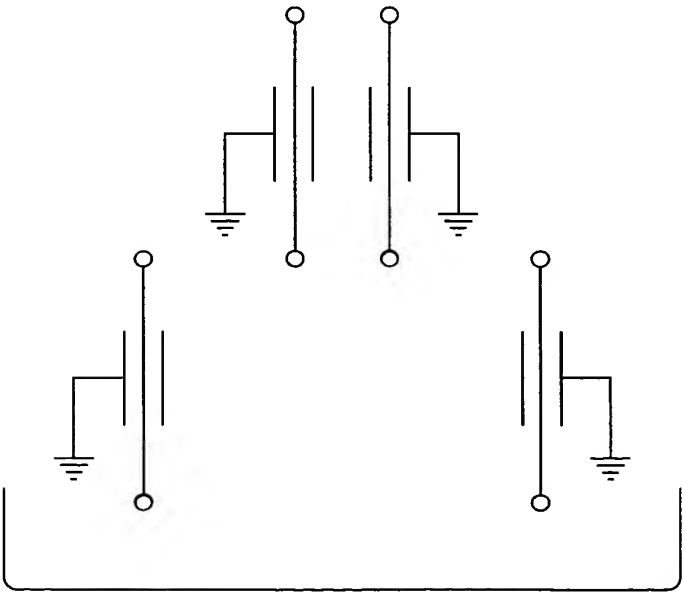
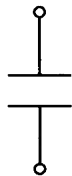


FIG. 6
PRIOR ART



FILTER L/C COMPONENTS



1. Capacitive Reactance, X_c (ohms)

$$X_c = \frac{-j}{2 \times \pi \times f \times C}, \text{ where:}$$

C = Capacitance in Microfarads

f = Frequency in Megahertz

Example, 1 Microfarad "Ideal" Capacitor

| | |
|---------|---------------------------|
| DC | infinite ohms (open ckt.) |
| 1 KHz | 159.2 ohms |
| 1 MHz | 0.159 ohms |
| 100 MHz | 0.00159 ohms (short) |

FIG. 7
PRIOR ART

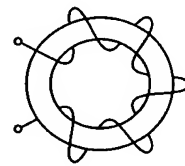
FILTER L/C COMPONENTS

1. Inductive Reactance, X_L (ohms)

$$X_L = atj \times 2 \times \pi \times f \times L, \text{ where:}$$

L = Inductance in Microhenries

f = Frequency in Megahertz



Example, 100 Microhenry "Ideal" Toroidal Inductor

| | |
|---------|--------------------------|
| DC | 0.0 ohms (short circuit) |
| 1 KHz | 0.628 ohms |
| 1 MHz | 628.0 ohms |
| 100 MHz | 62.83 ohms |

FIG. 8
PRIOR ART

Common EMI Filter Circuits

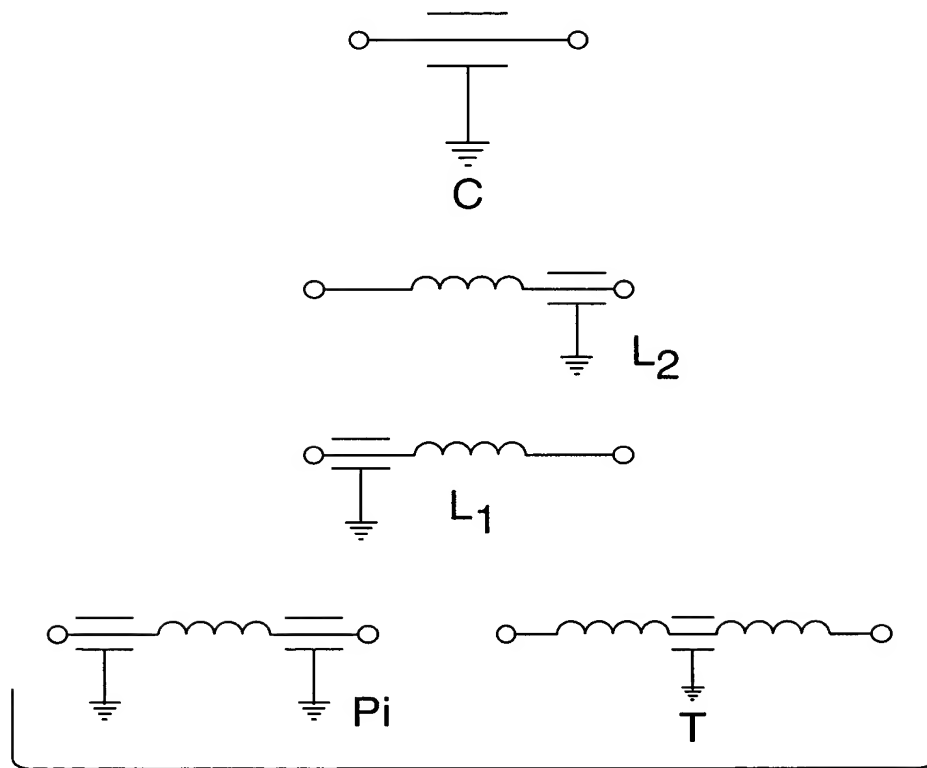


FIG. 9
PRIOR ART

COMPARISON OF INSERTION LOSS vs NUMBER OF COMPONENTS

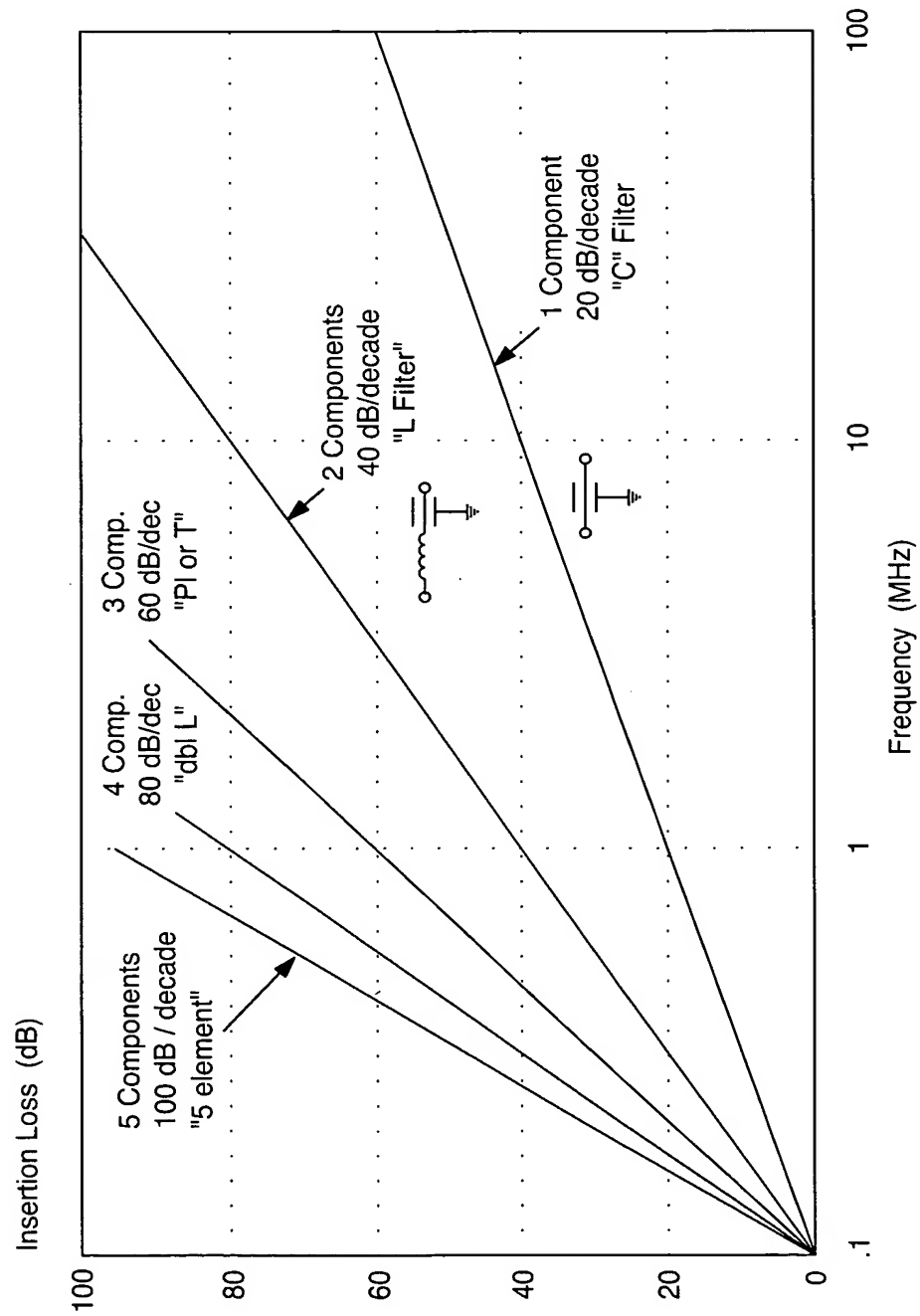


FIG. 10
PRIOR ART

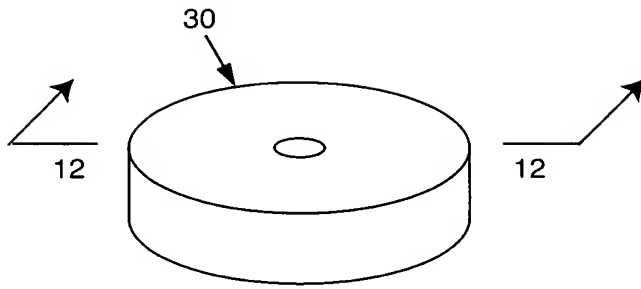


FIG. 11
PRIOR ART

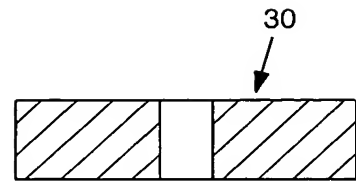


FIG. 12
PRIOR ART

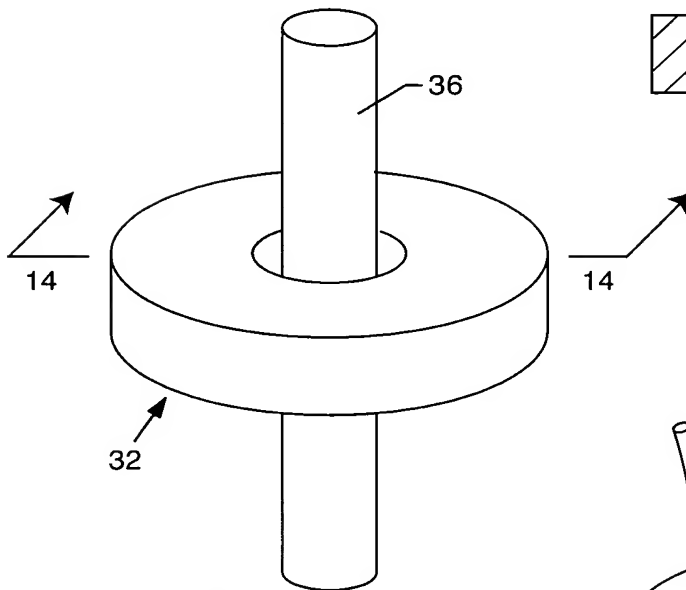


FIG. 13
PRIOR ART

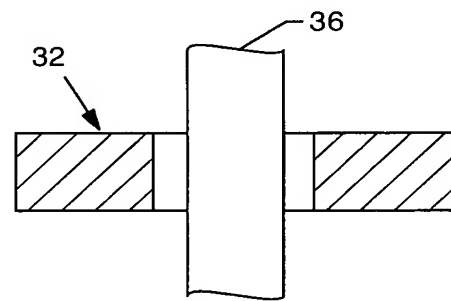


FIG. 14
PRIOR ART

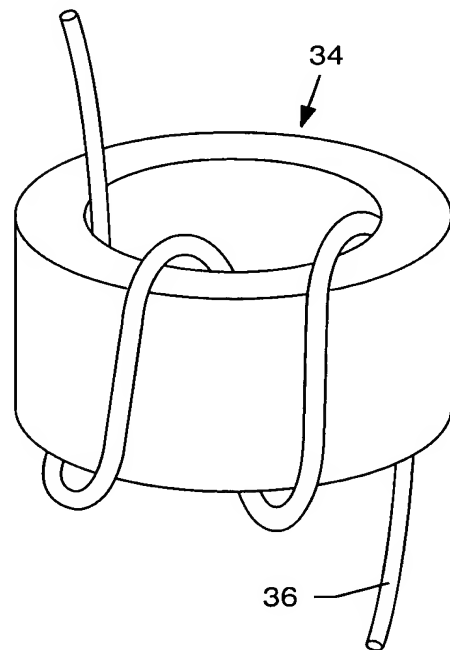
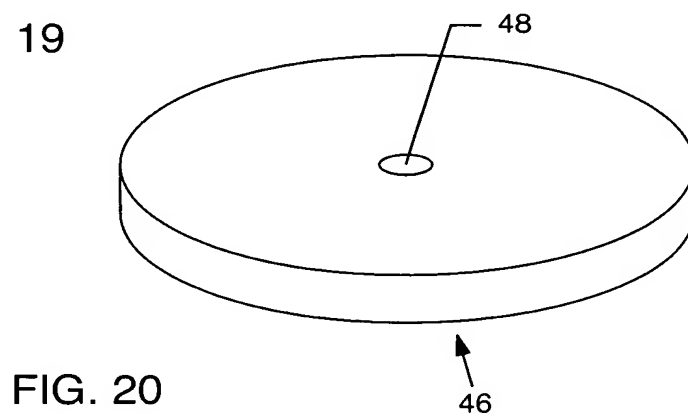
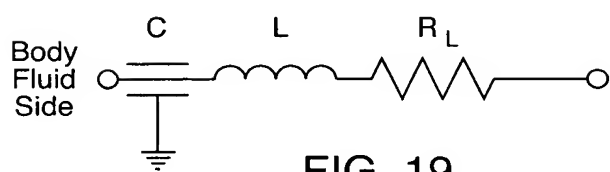
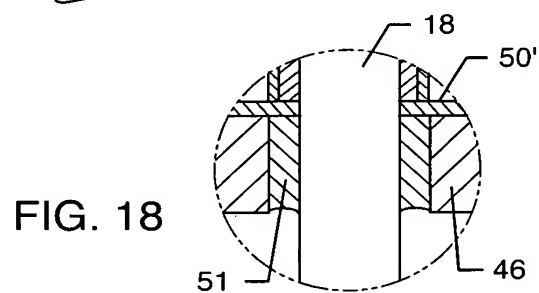
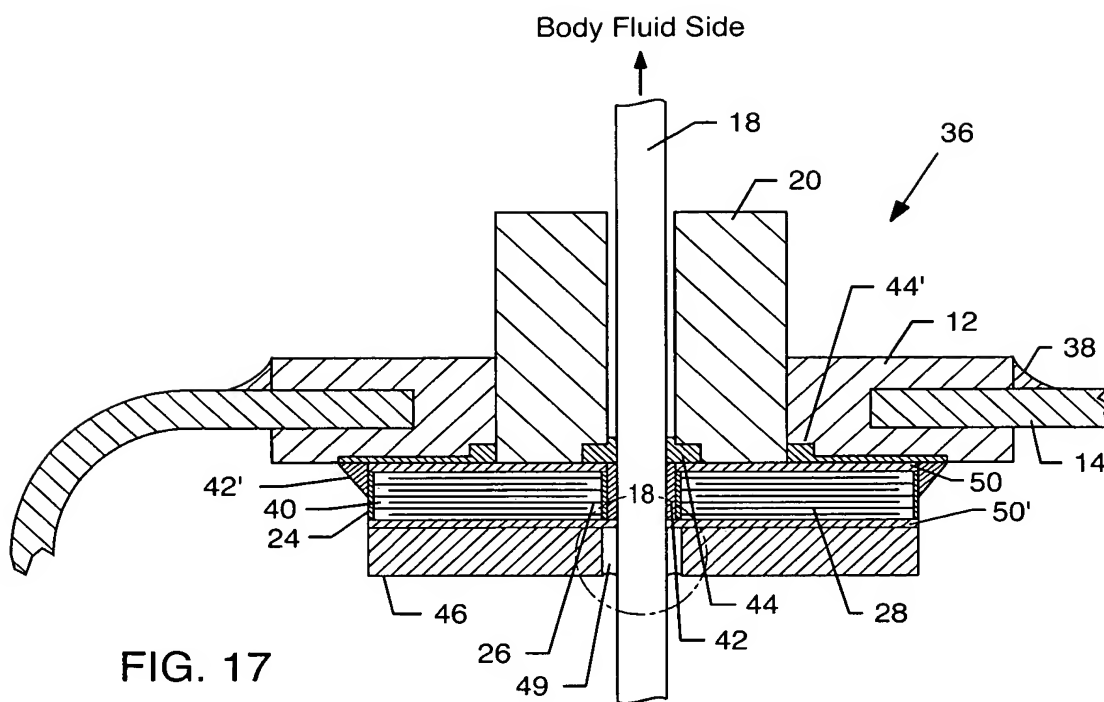


FIG. 15
PRIOR ART

**THERMOPLASTIC POLYIMIDE SUPPORTED
TAPE ADHESIVE**

| MECHANICAL PROPERTIES | TEST METHOD |
|---|-------------------------|
| <p>90° Peel Strength - 250 mil (6.3 mm) width Alloy 42 substrate @ 25°C: 5.0 lb_r (2.3 kg_r) peak @ 230°C: 1.4 lb_r (0.64 kg_r) peak</p> <p>PI Coated Si Substrate @ 25°C: 5.5 lb_r (2.5 kg_r) peak @ 230°C: 1.2 lb_r (0.55 kg_r) peak</p> <p>Flatwise Tensile Strength - 250 mil² (6.3 mm²) Alloy 42 substrate @ 25°C: 3300 psi (93 kg) @ 230°C: 450 psi (13 kg)</p> <p>(¹) TH exposure - 16 hours, 85° C/85% RH</p> | <p>MT-8</p> <p>MT-1</p> |

FIG. 16



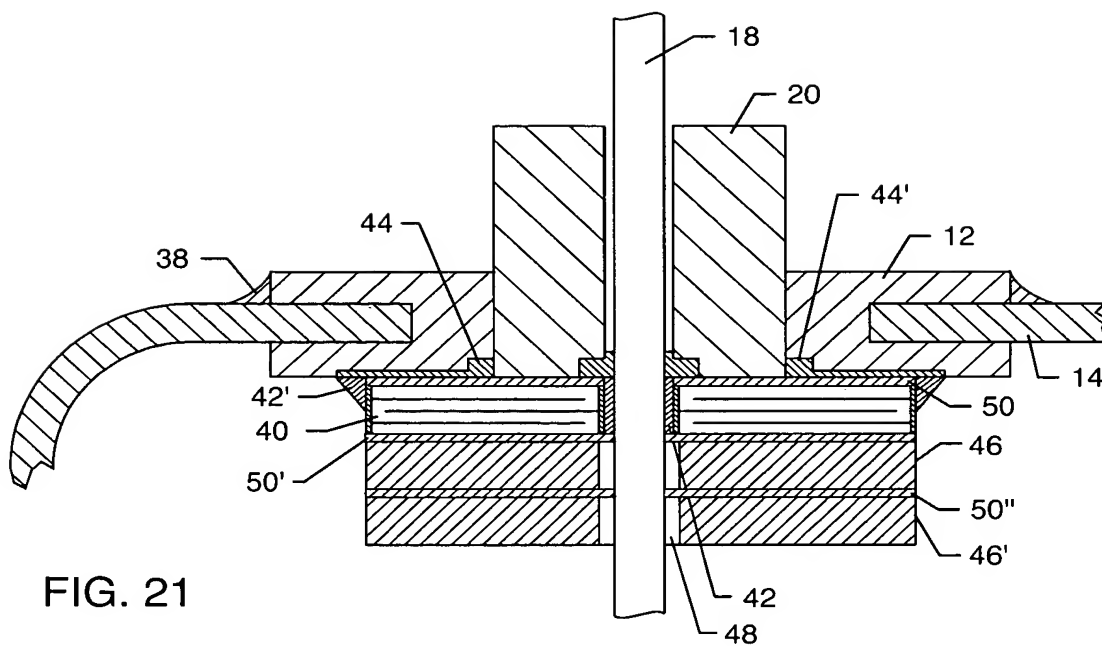


FIG. 21

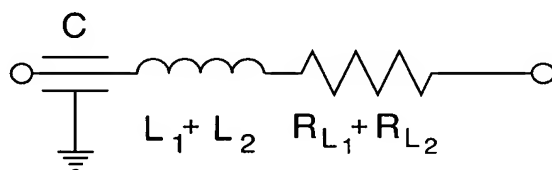


FIG. 22

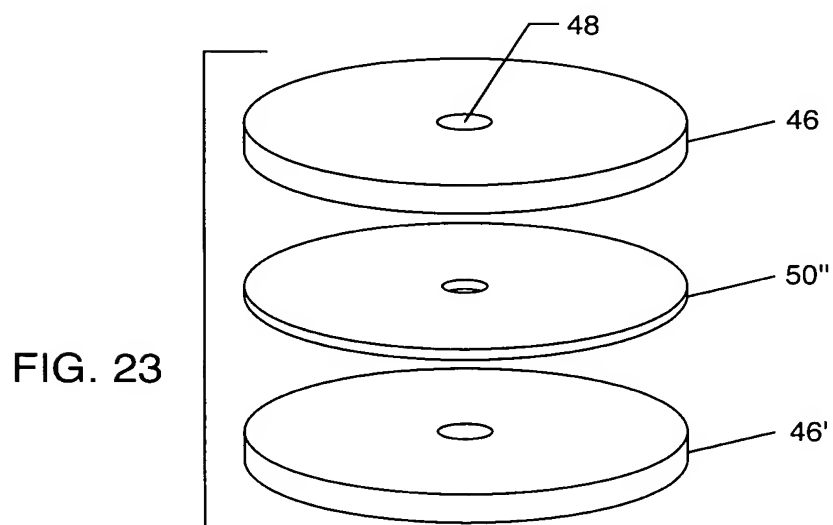


FIG. 23

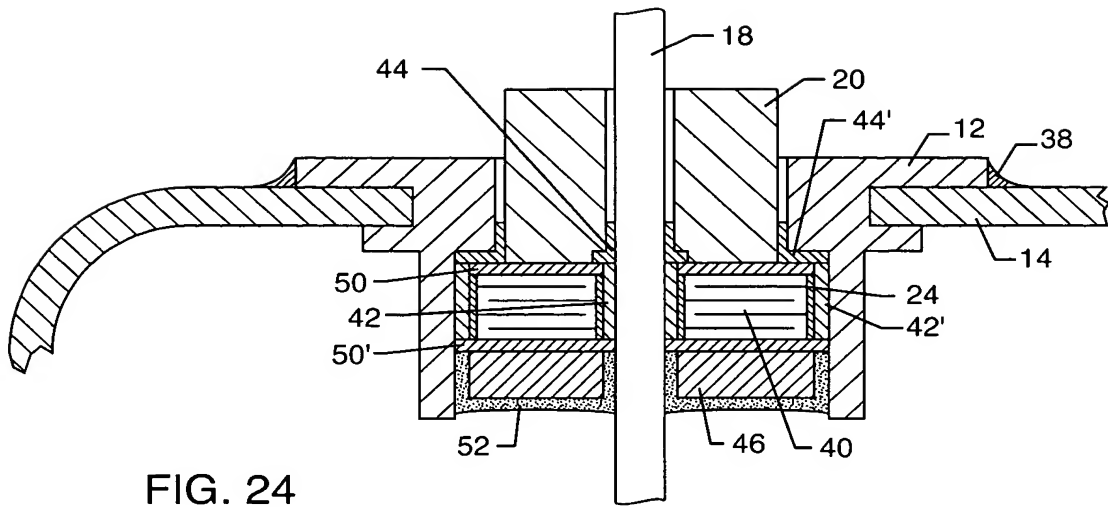


FIG. 24



FIG. 25

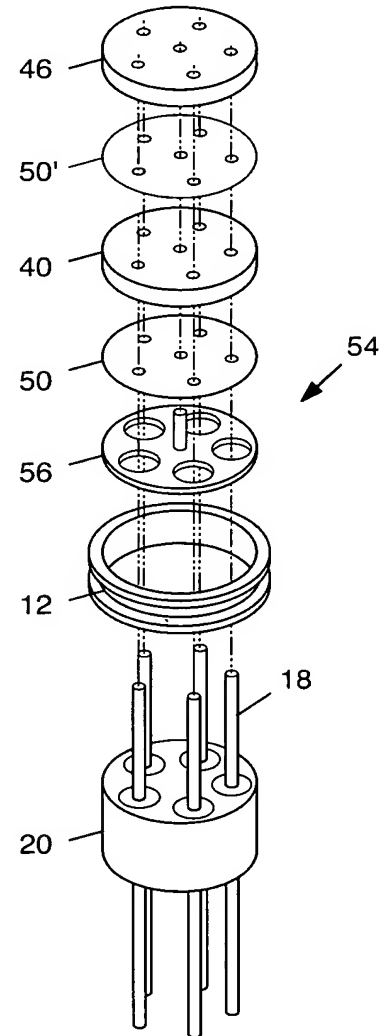


FIG. 26

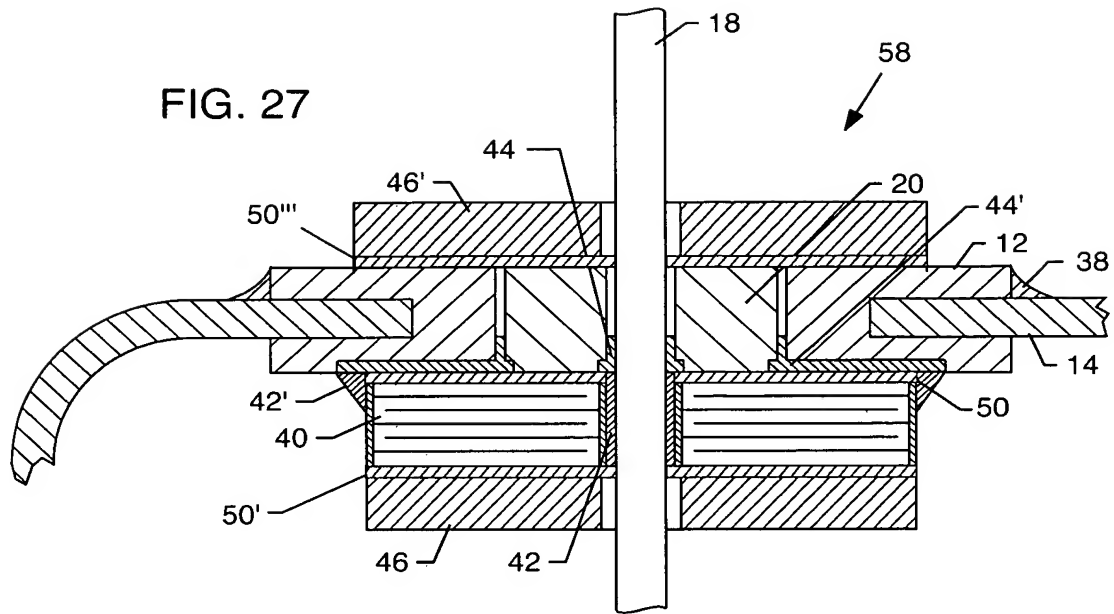


FIG. 28

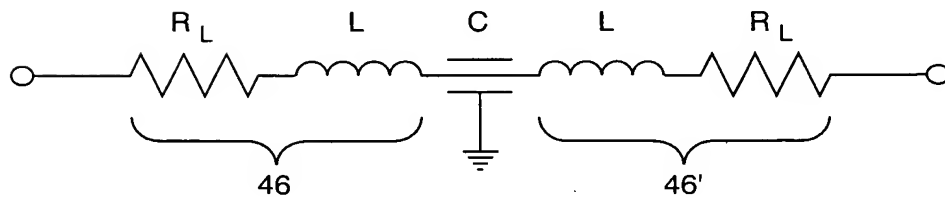
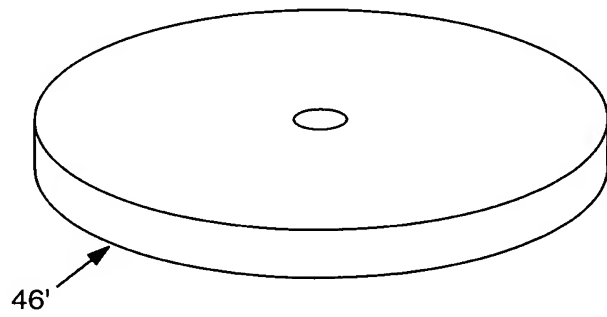


FIG. 29

12 / 34

Body Fluid Side

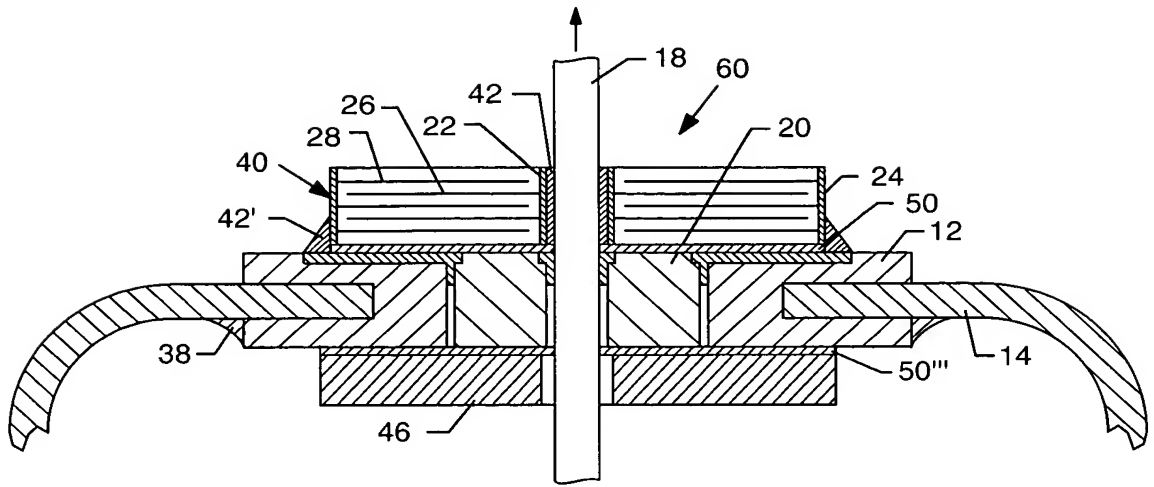


FIG. 30

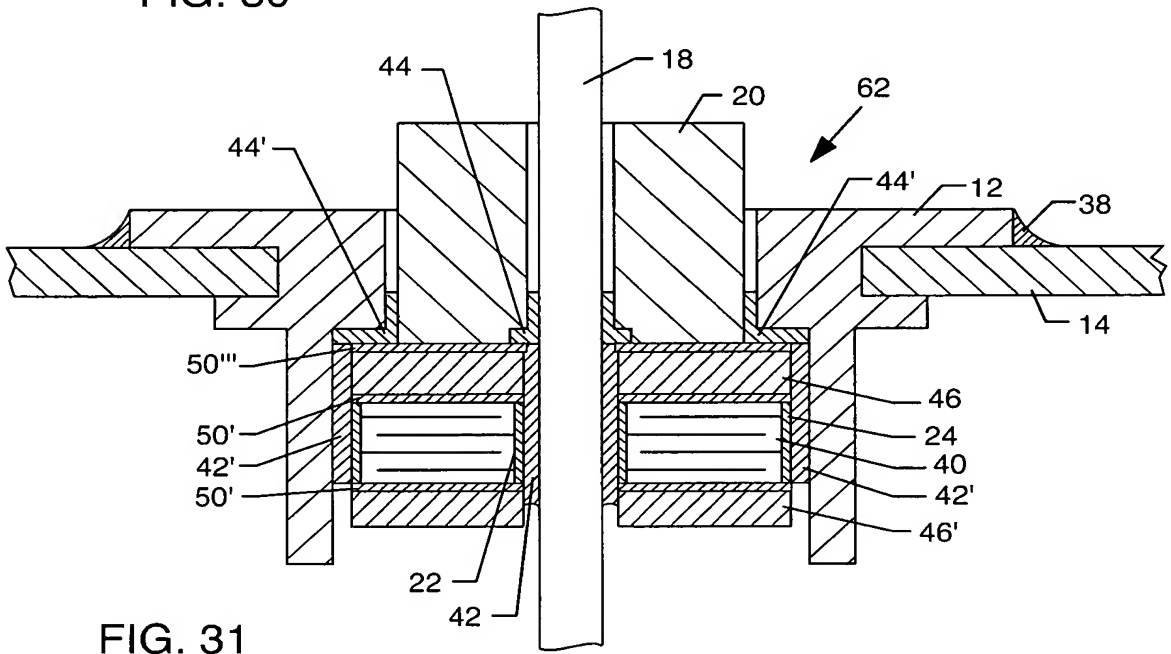


FIG. 31

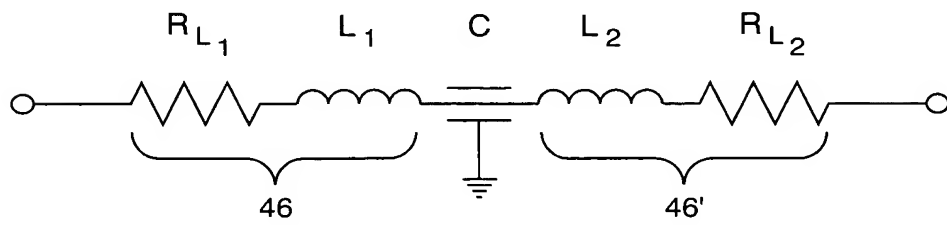


FIG. 32

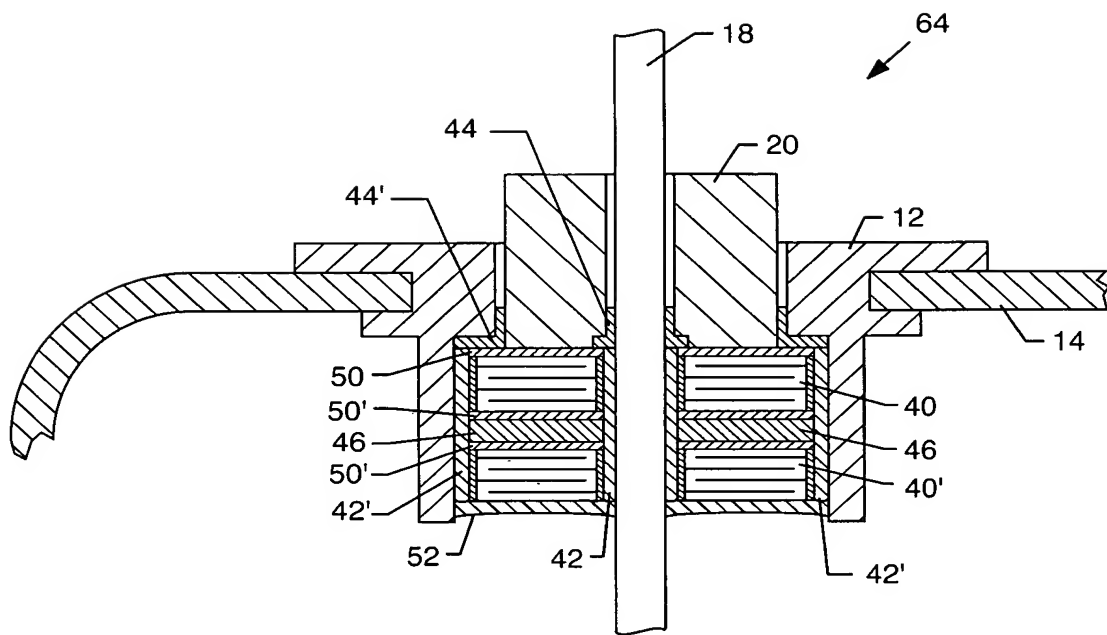


FIG. 33

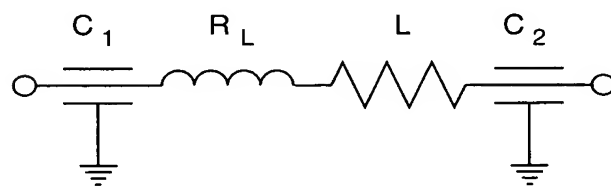


FIG. 34

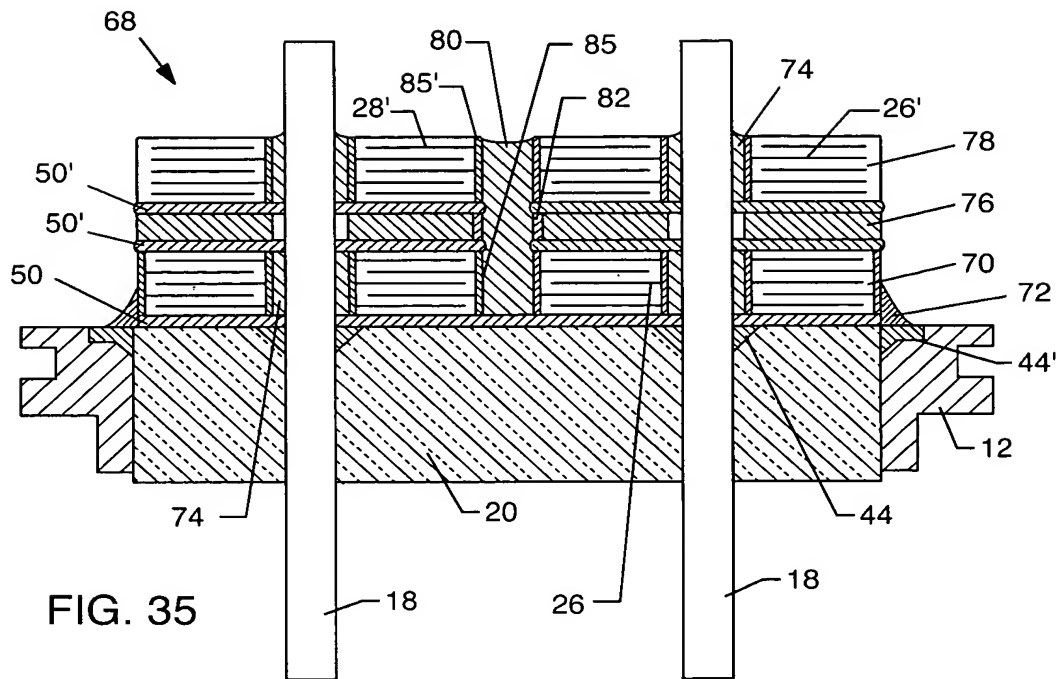


FIG. 36

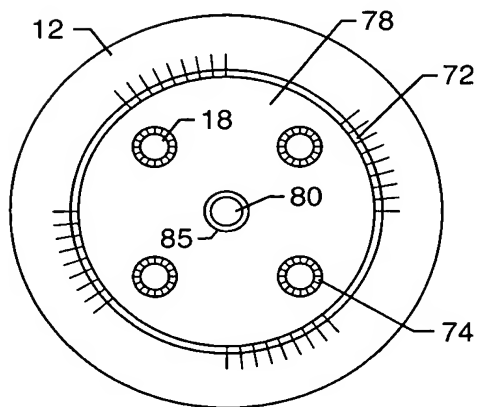
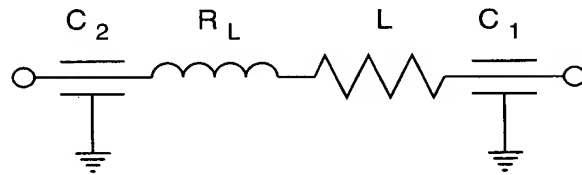
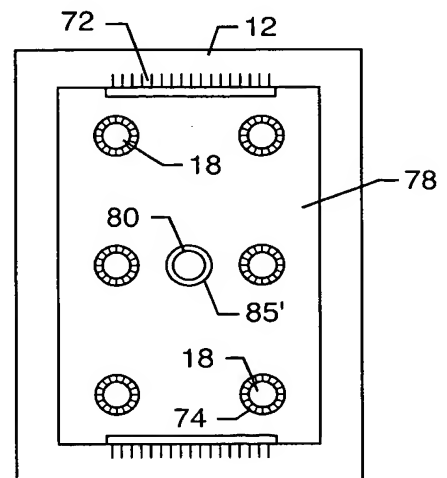


FIG. 38



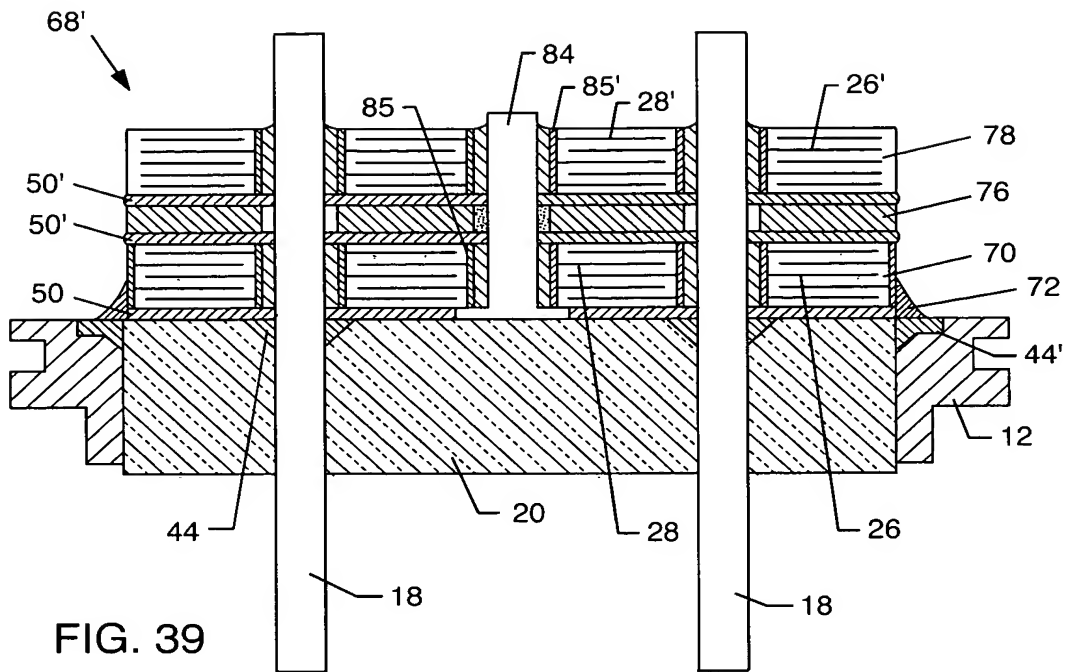


FIG. 39

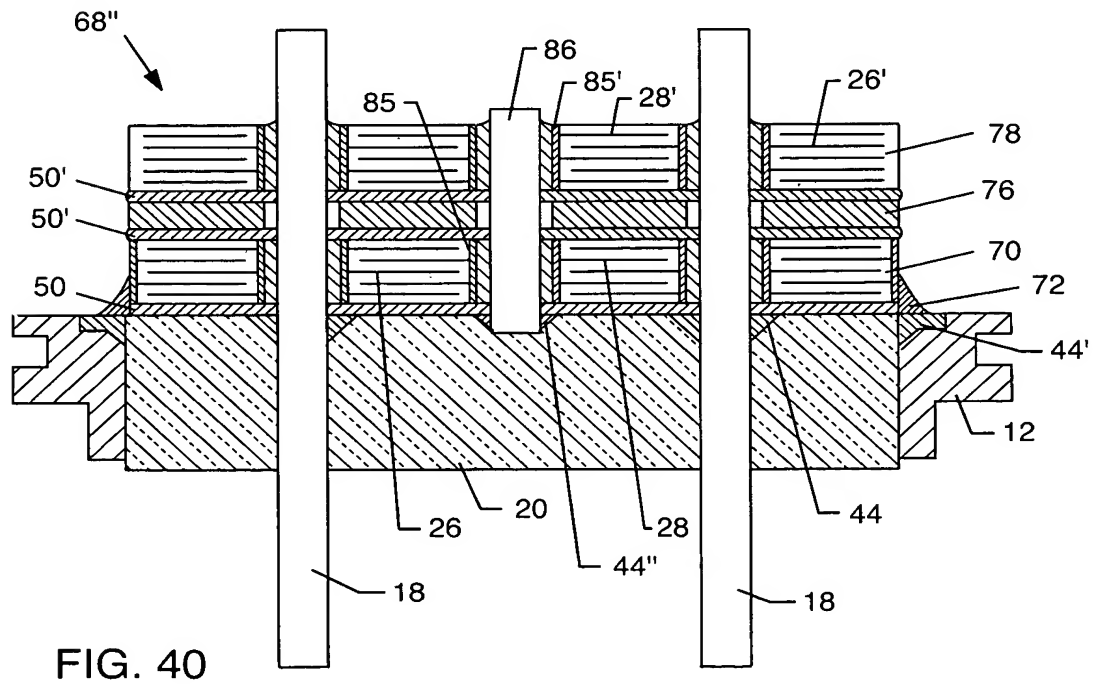


FIG. 40

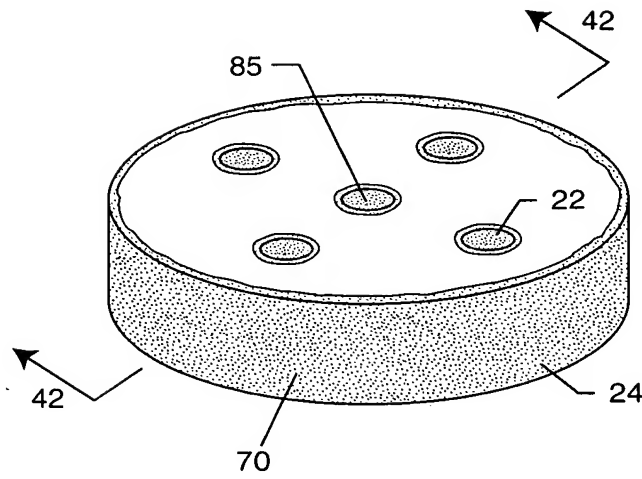


FIG. 41

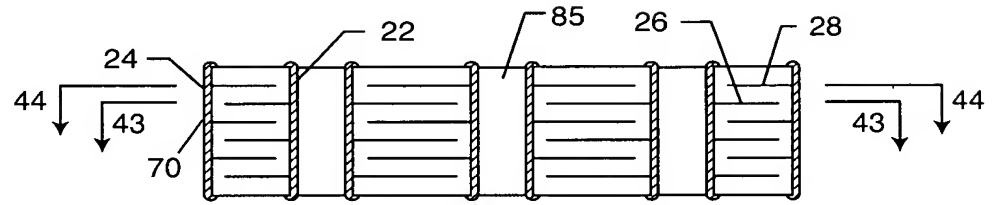


FIG. 42

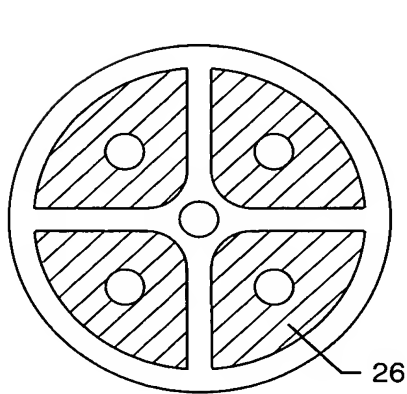


FIG. 43

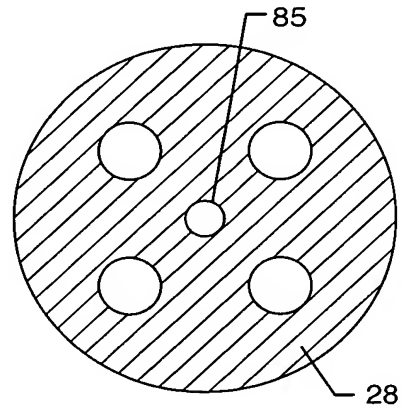
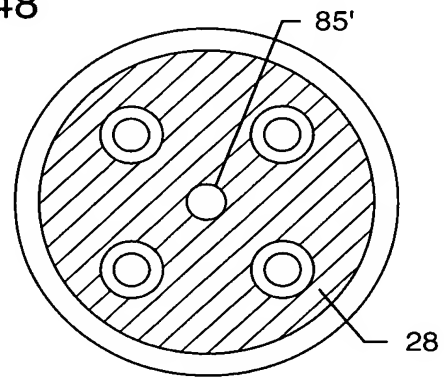
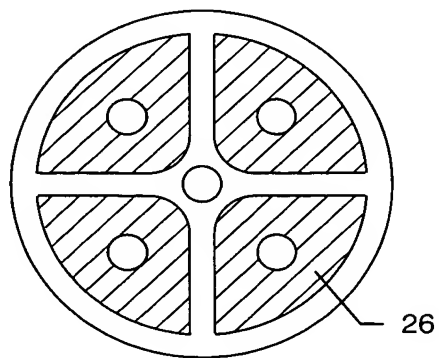
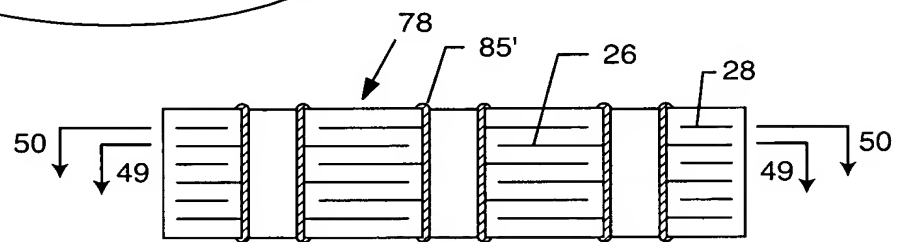
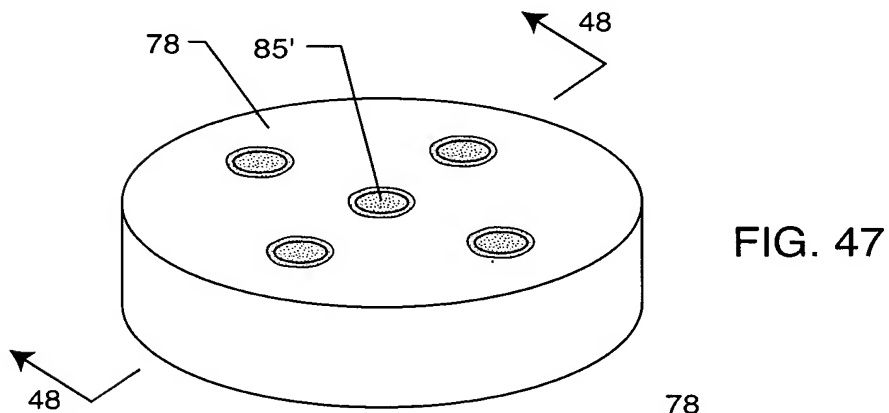
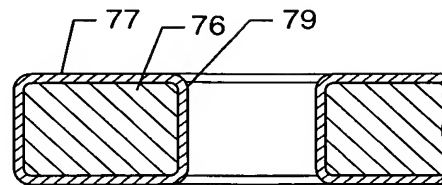
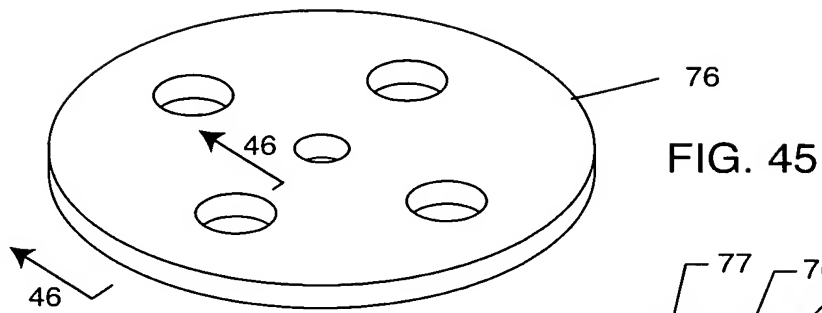


FIG. 44



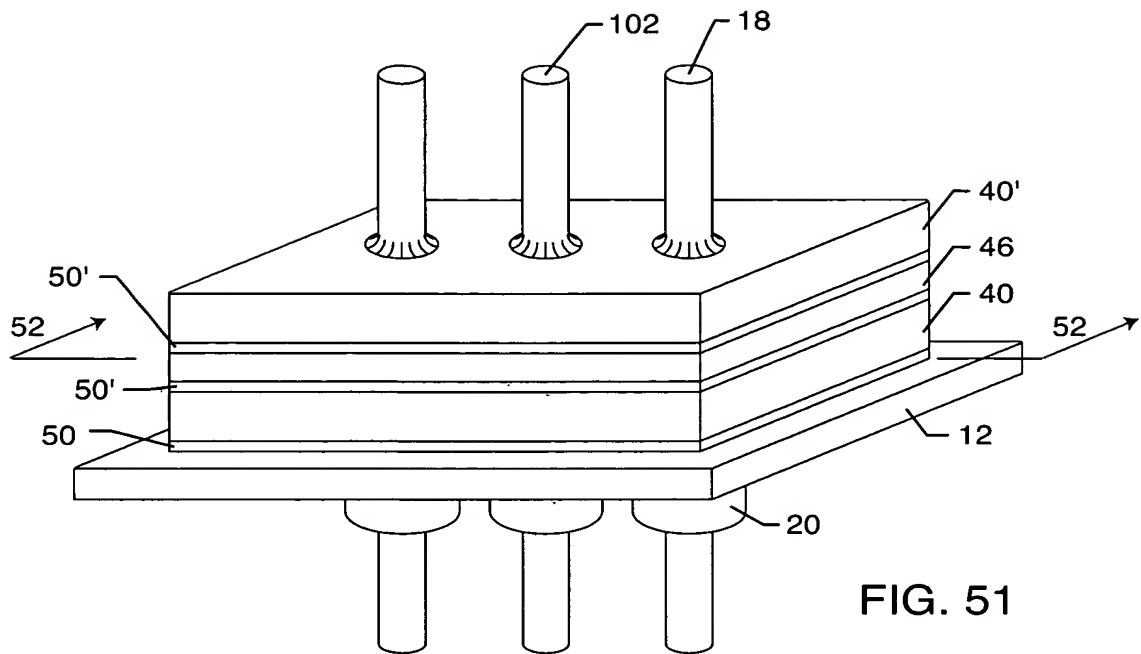


FIG. 51

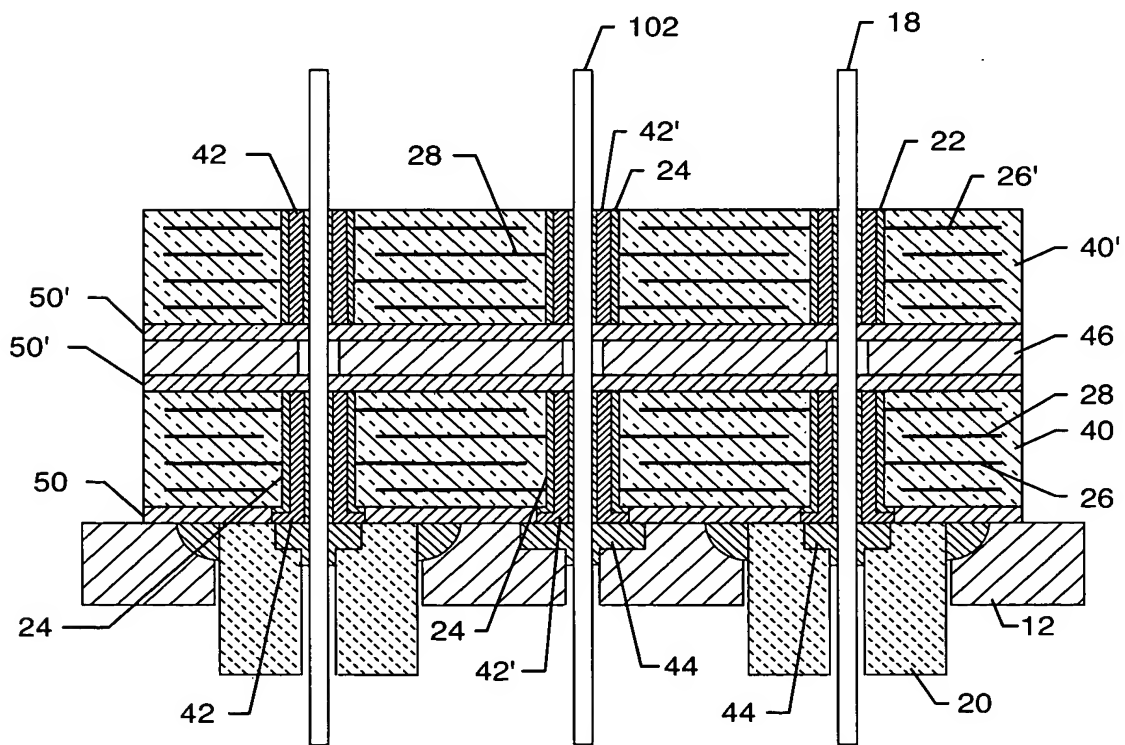


FIG. 52

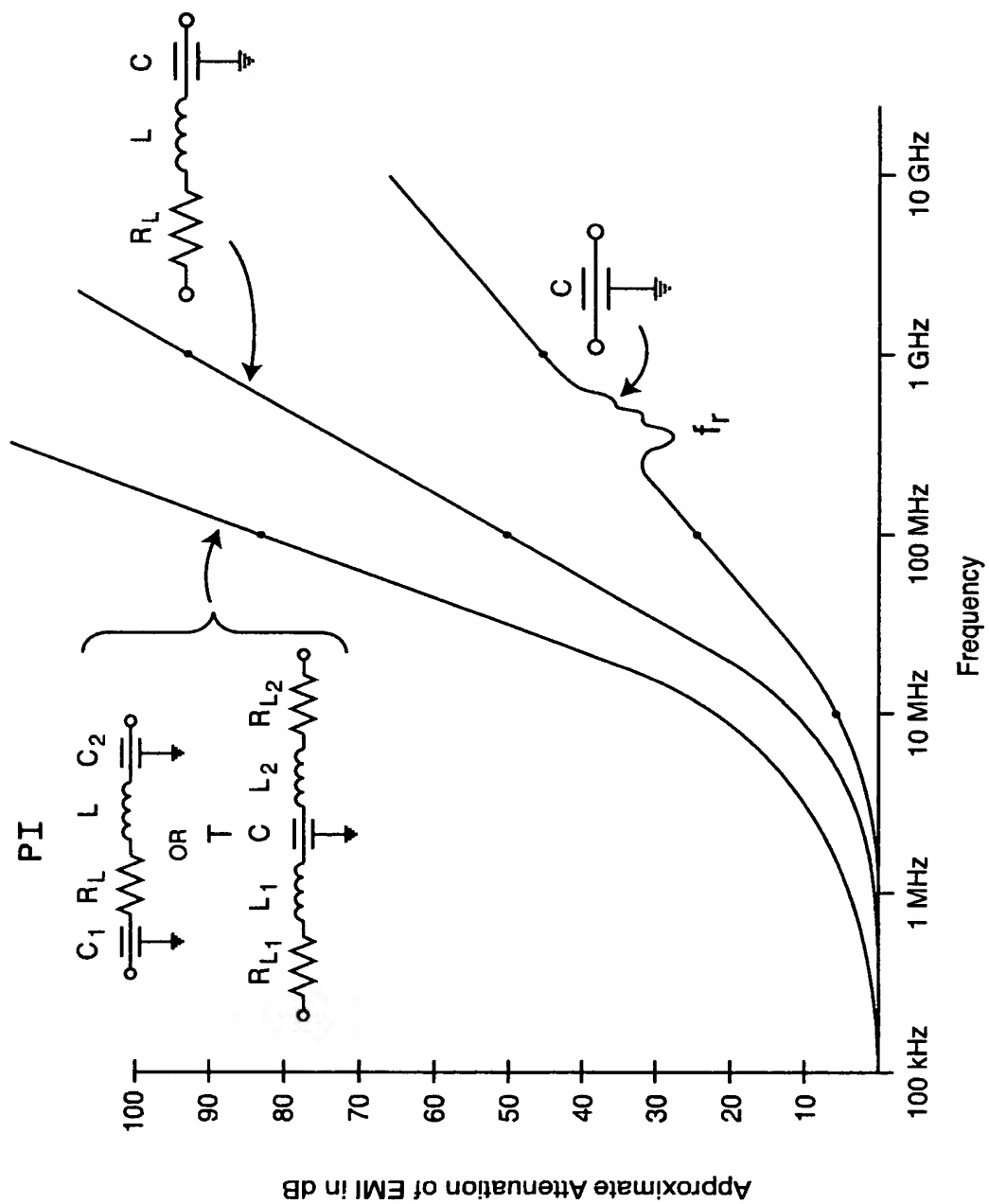


FIG. 53

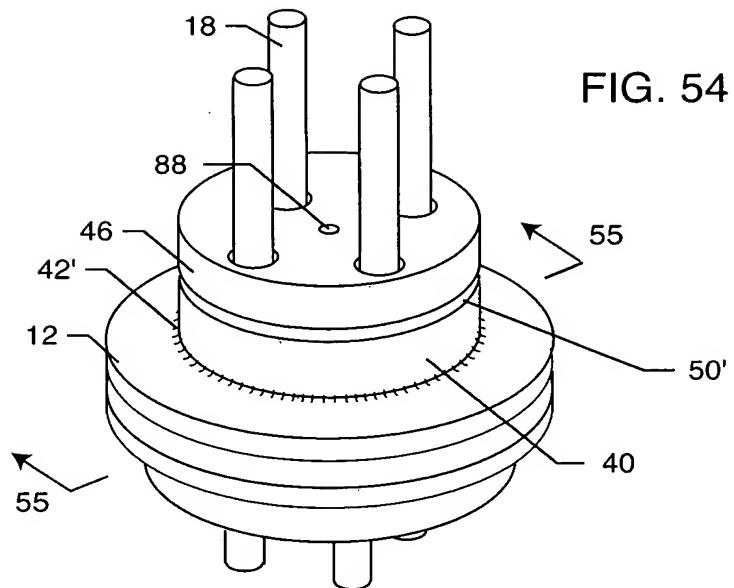
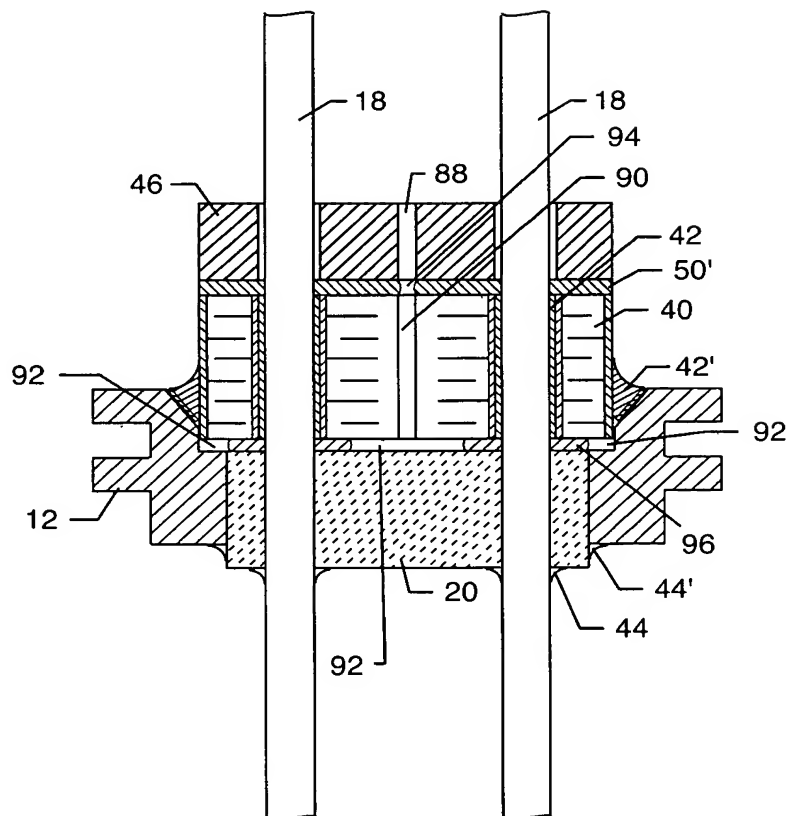


FIG. 55



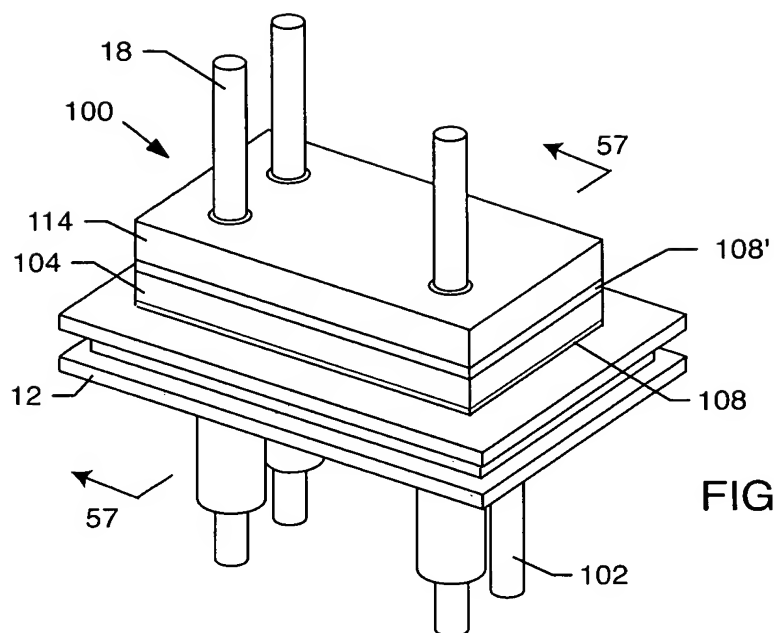


FIG. 56

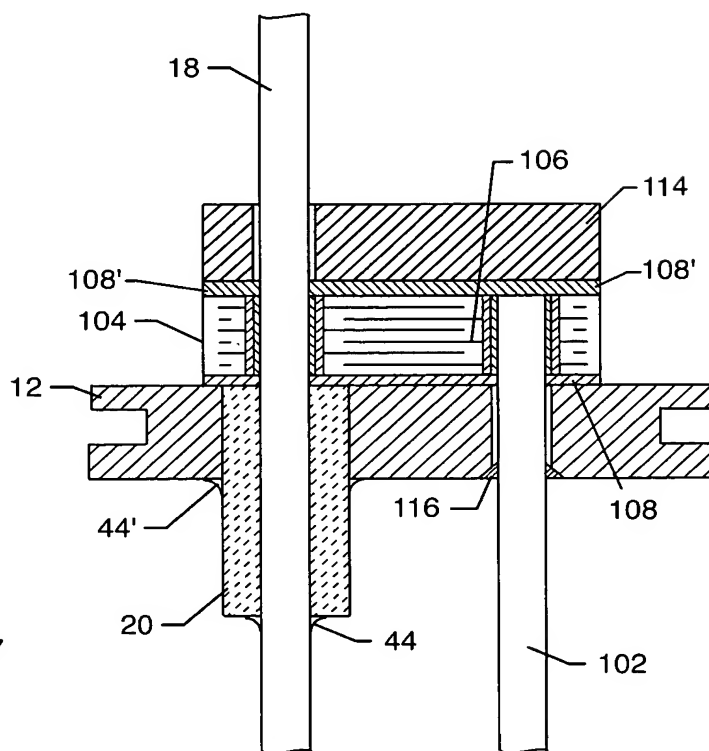


FIG. 57

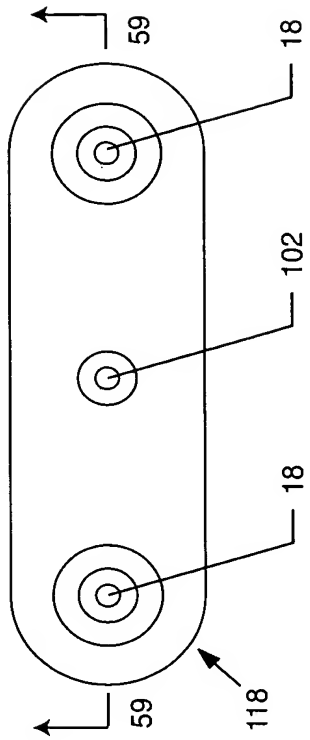


FIG. 58

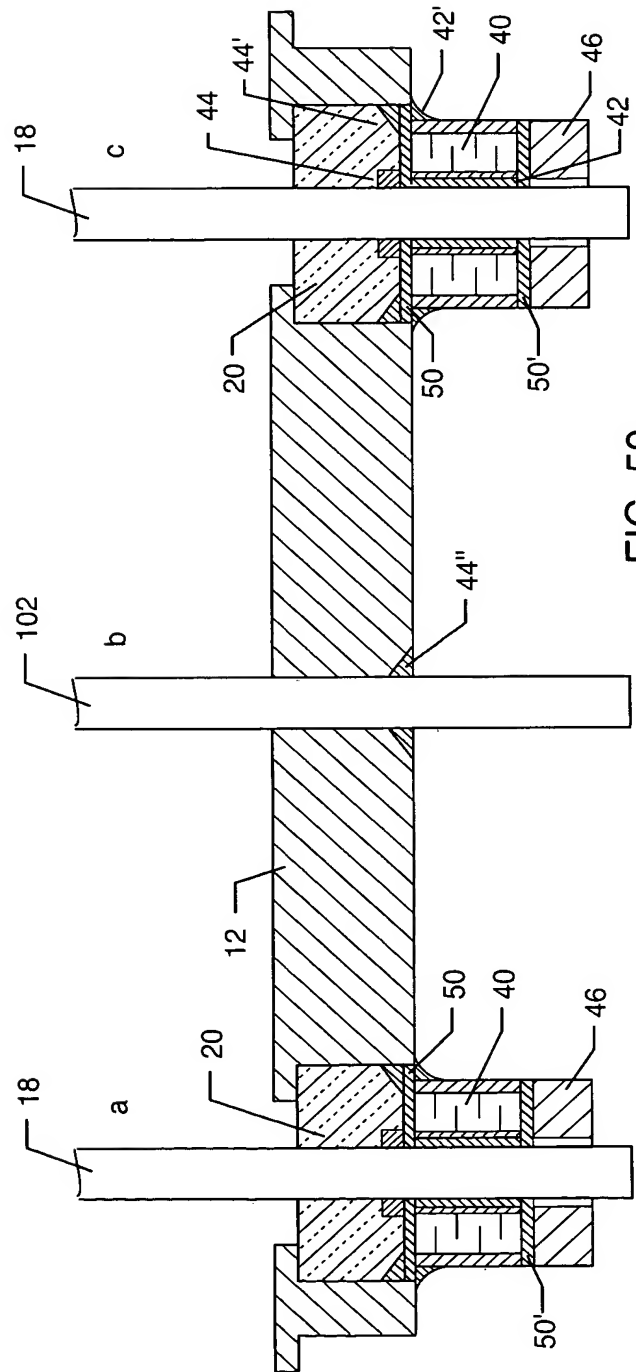
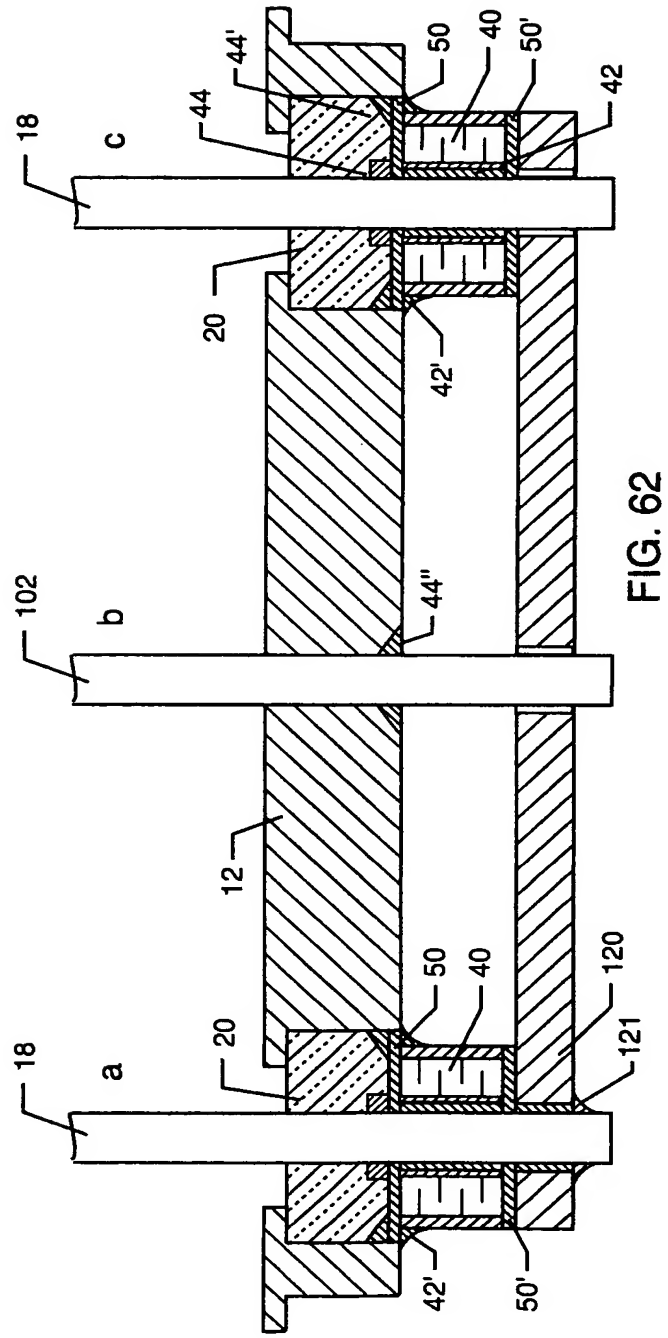
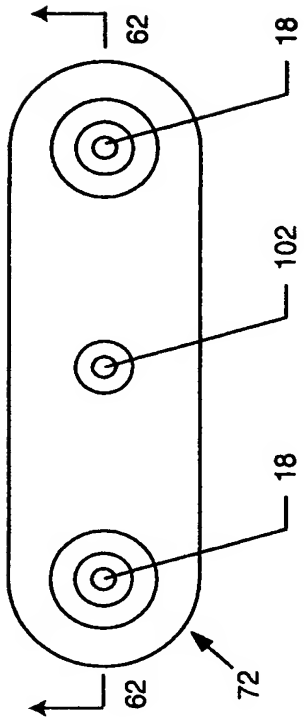
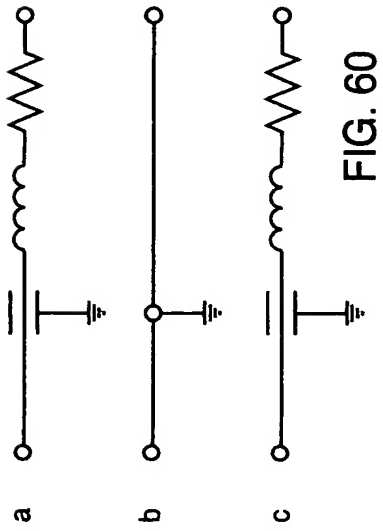


FIG. 59



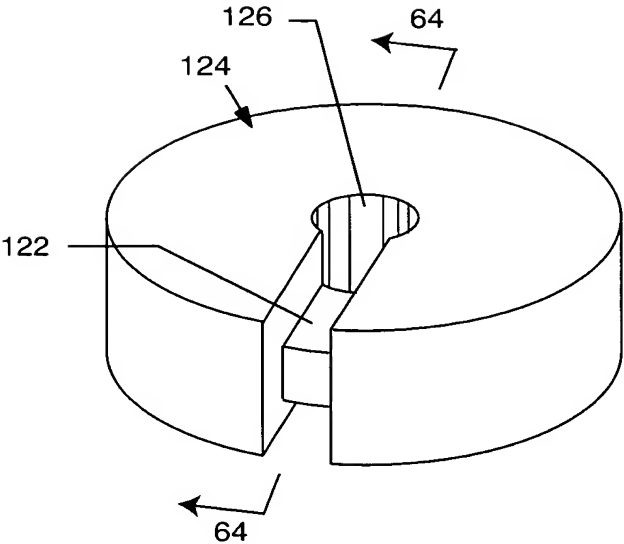


FIG. 63

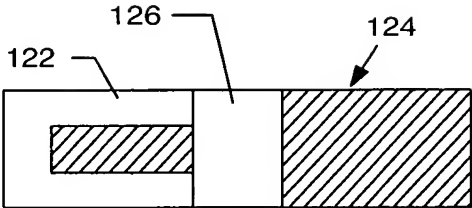


FIG. 64

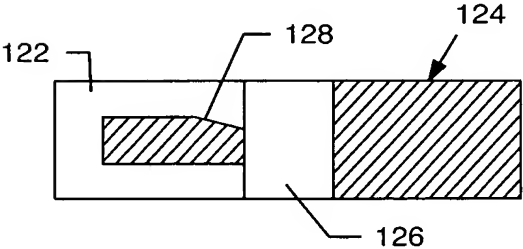


FIG. 65

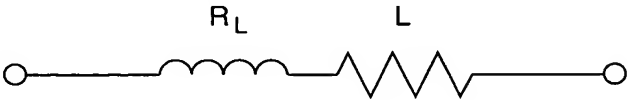


FIG. 66

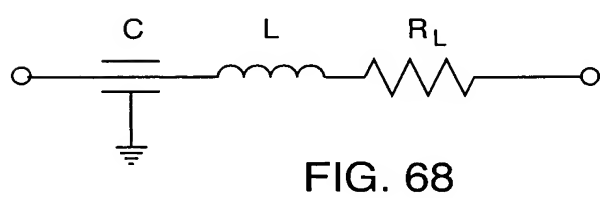
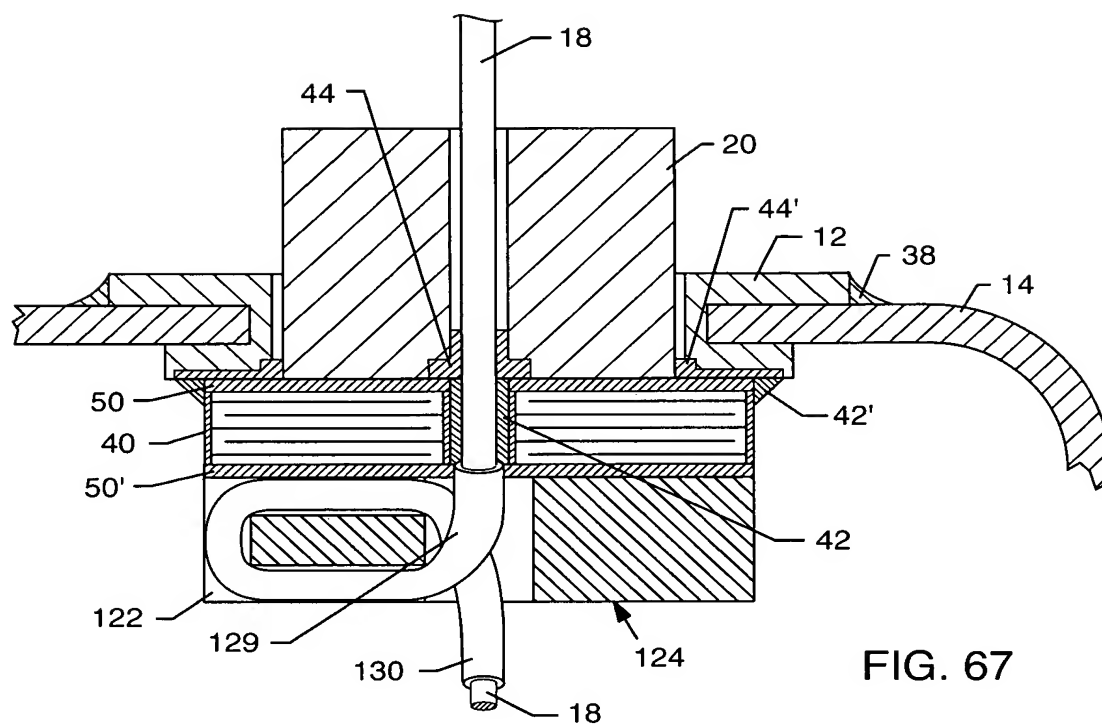
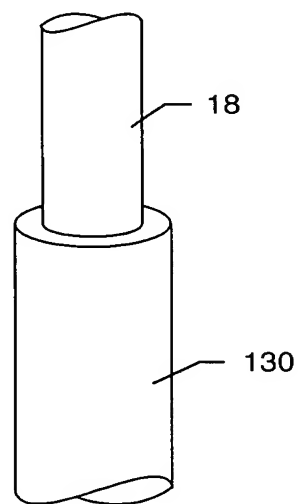


FIG. 69



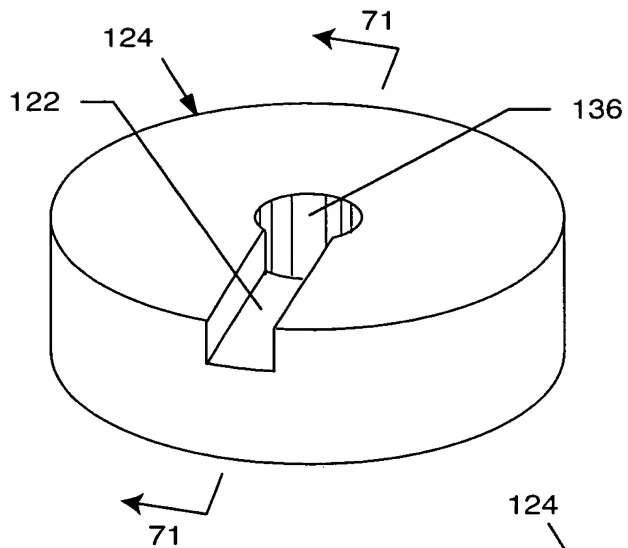


FIG. 70

FIG. 71

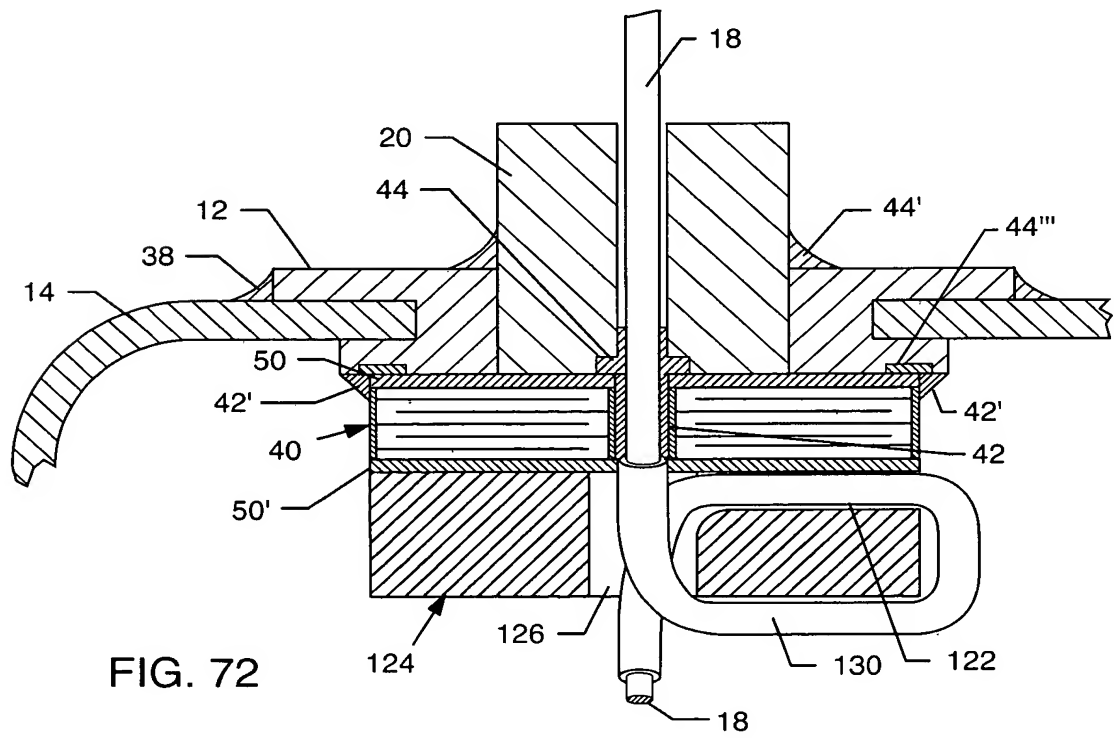
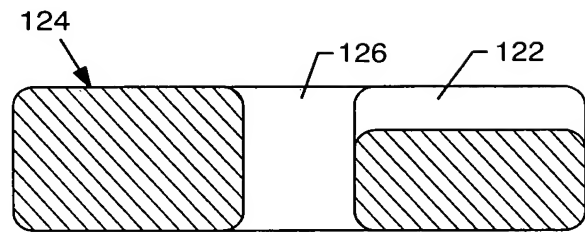


FIG. 72

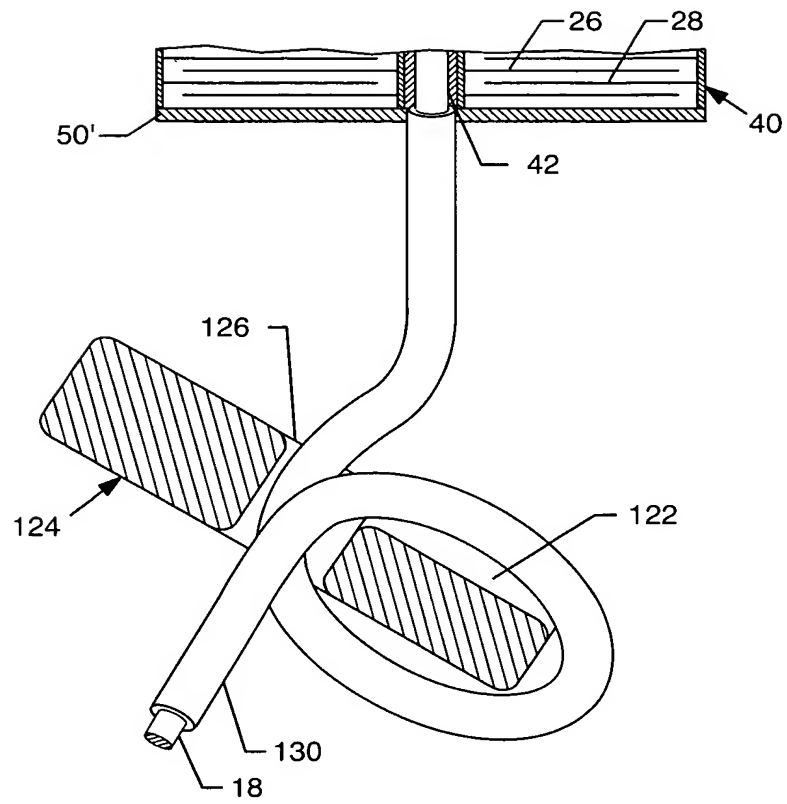
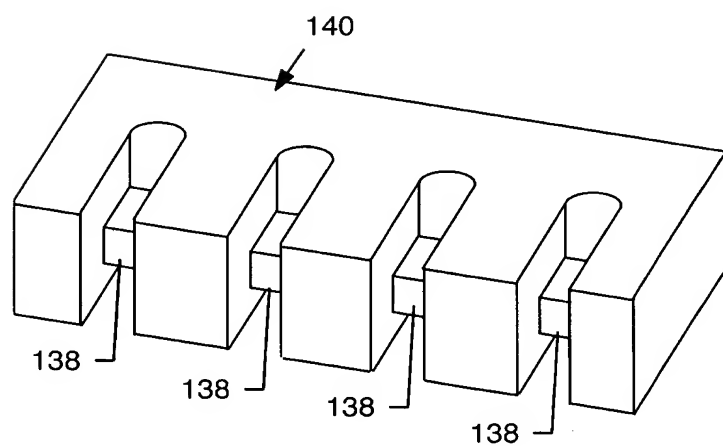
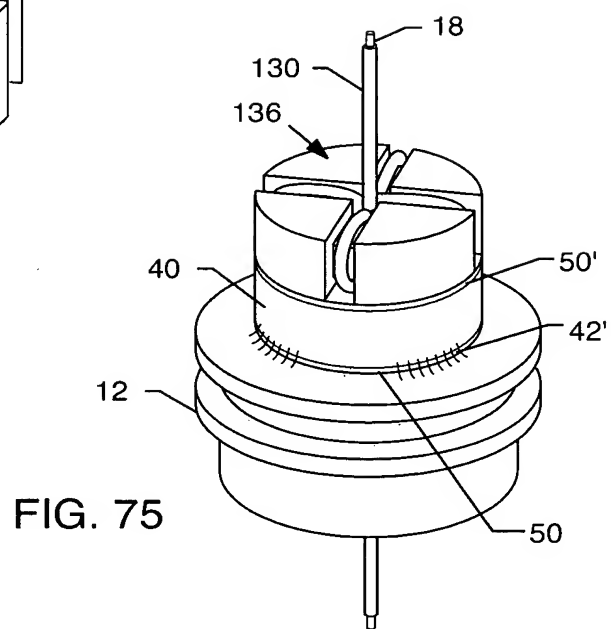
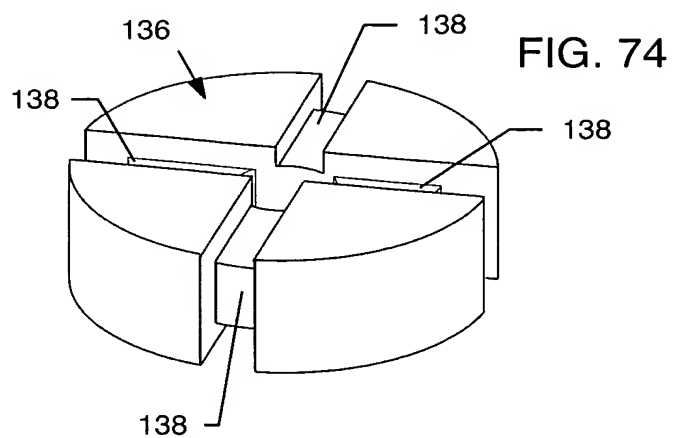


FIG. 73



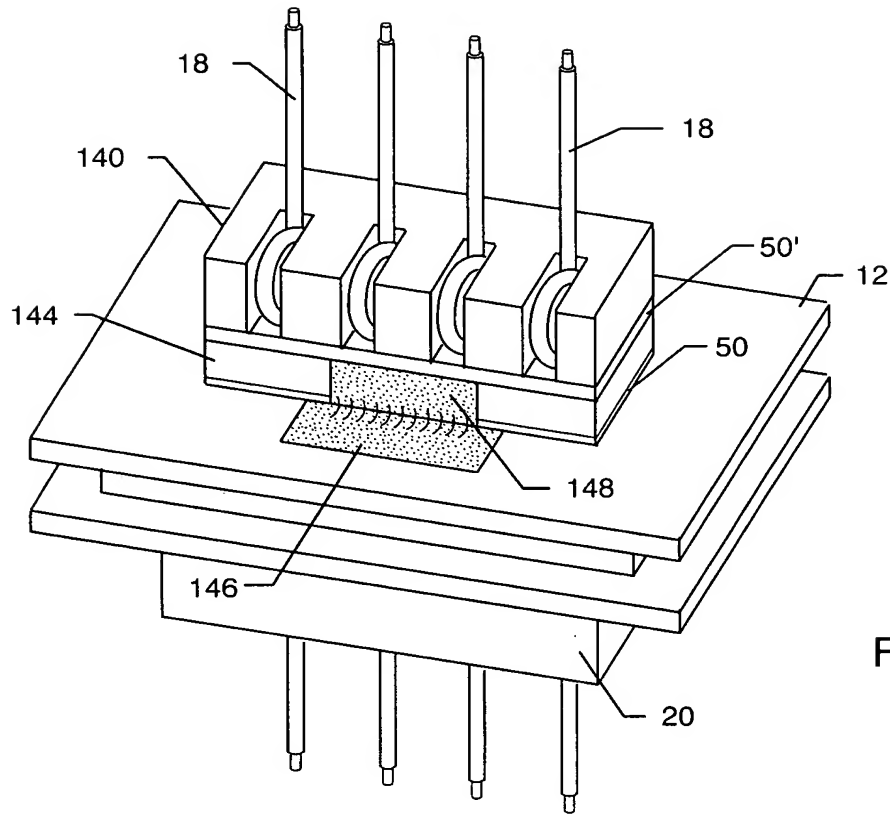


FIG. 77

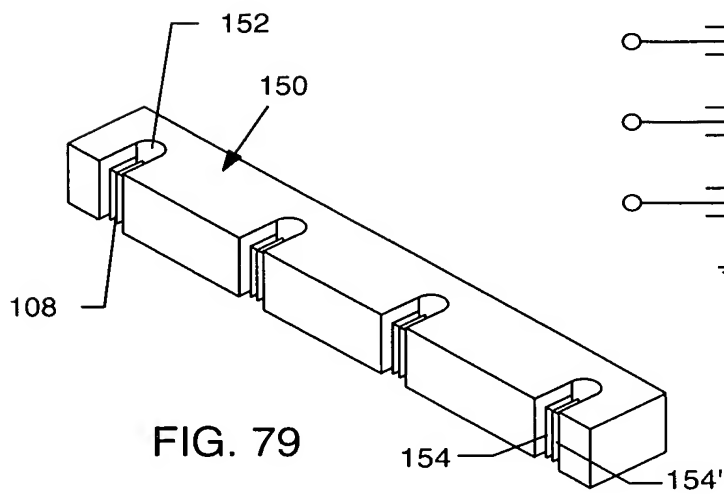


FIG. 79

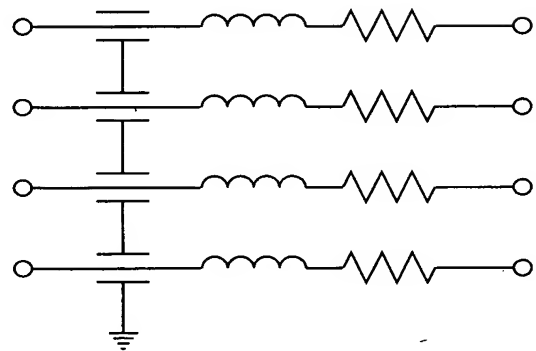


FIG. 78

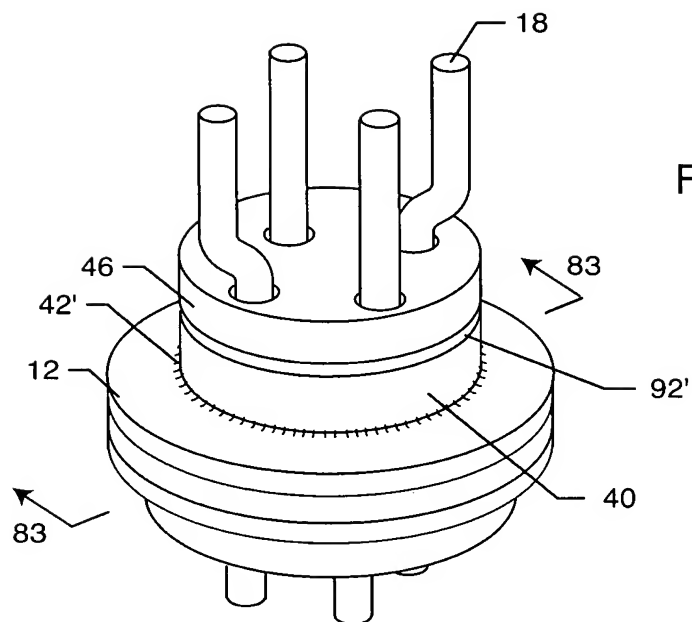
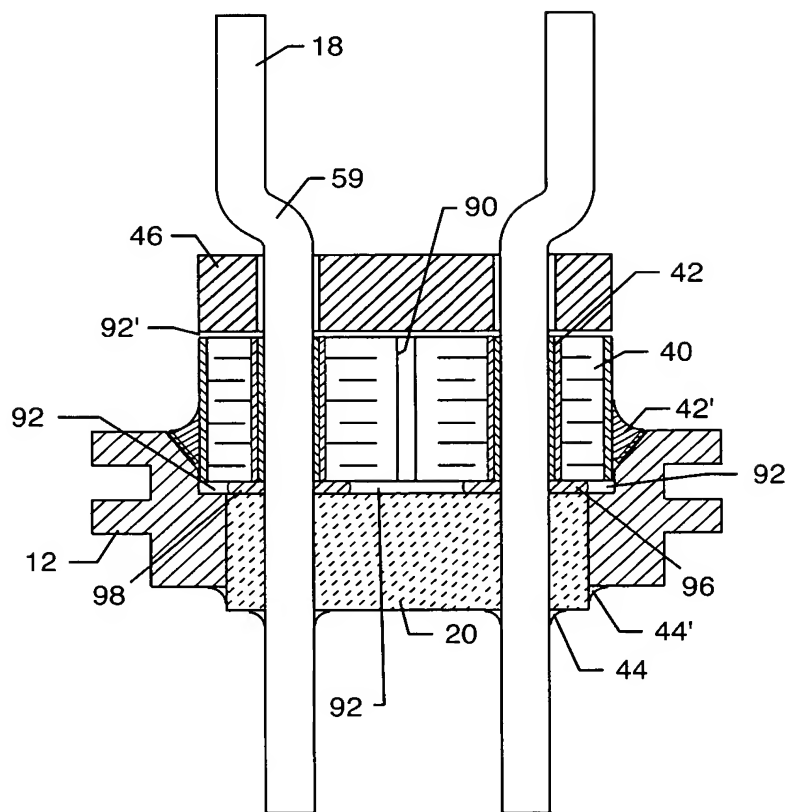
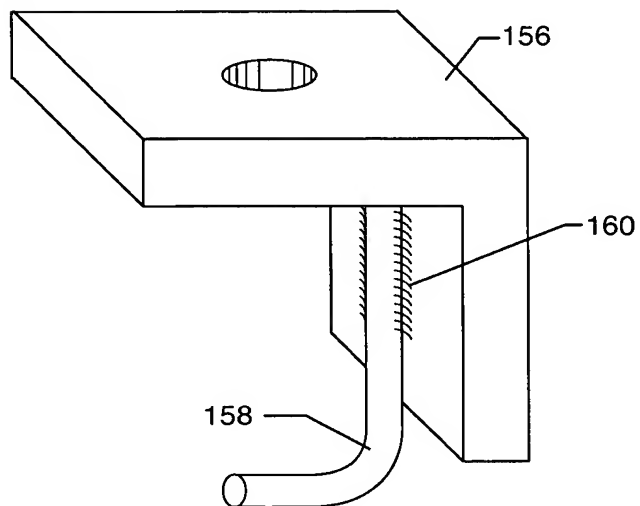
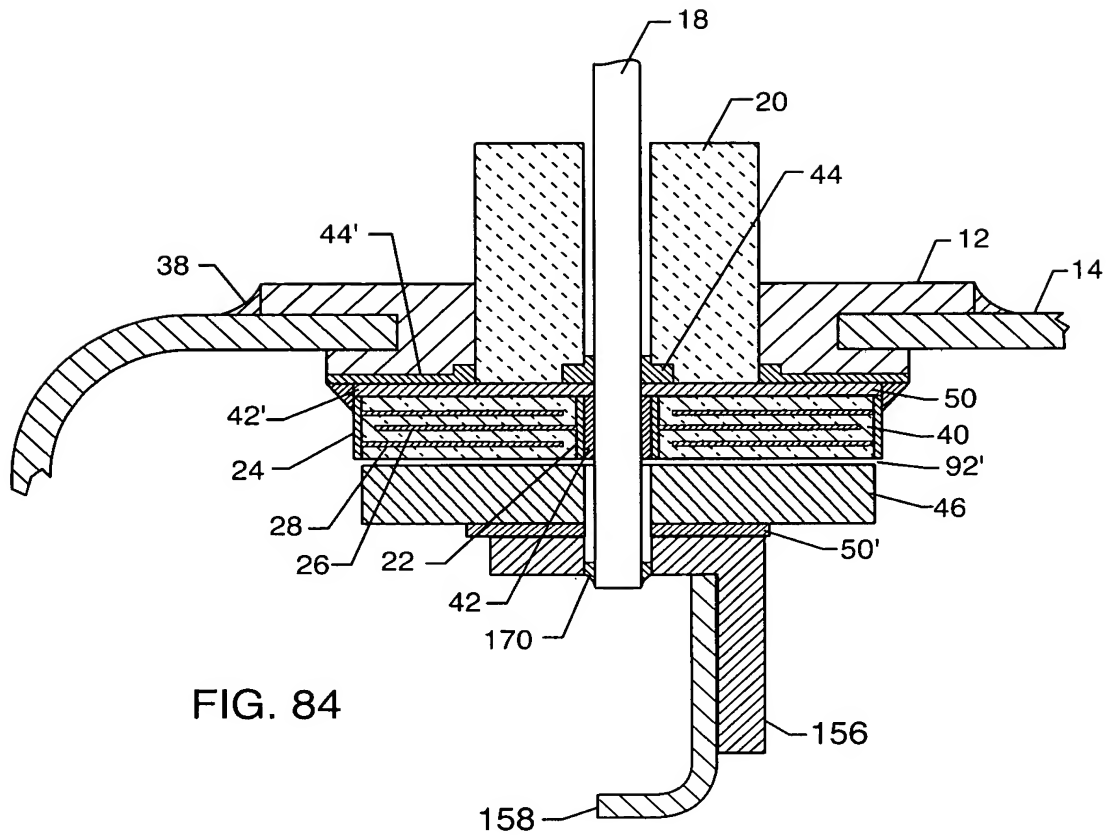


FIG. 83





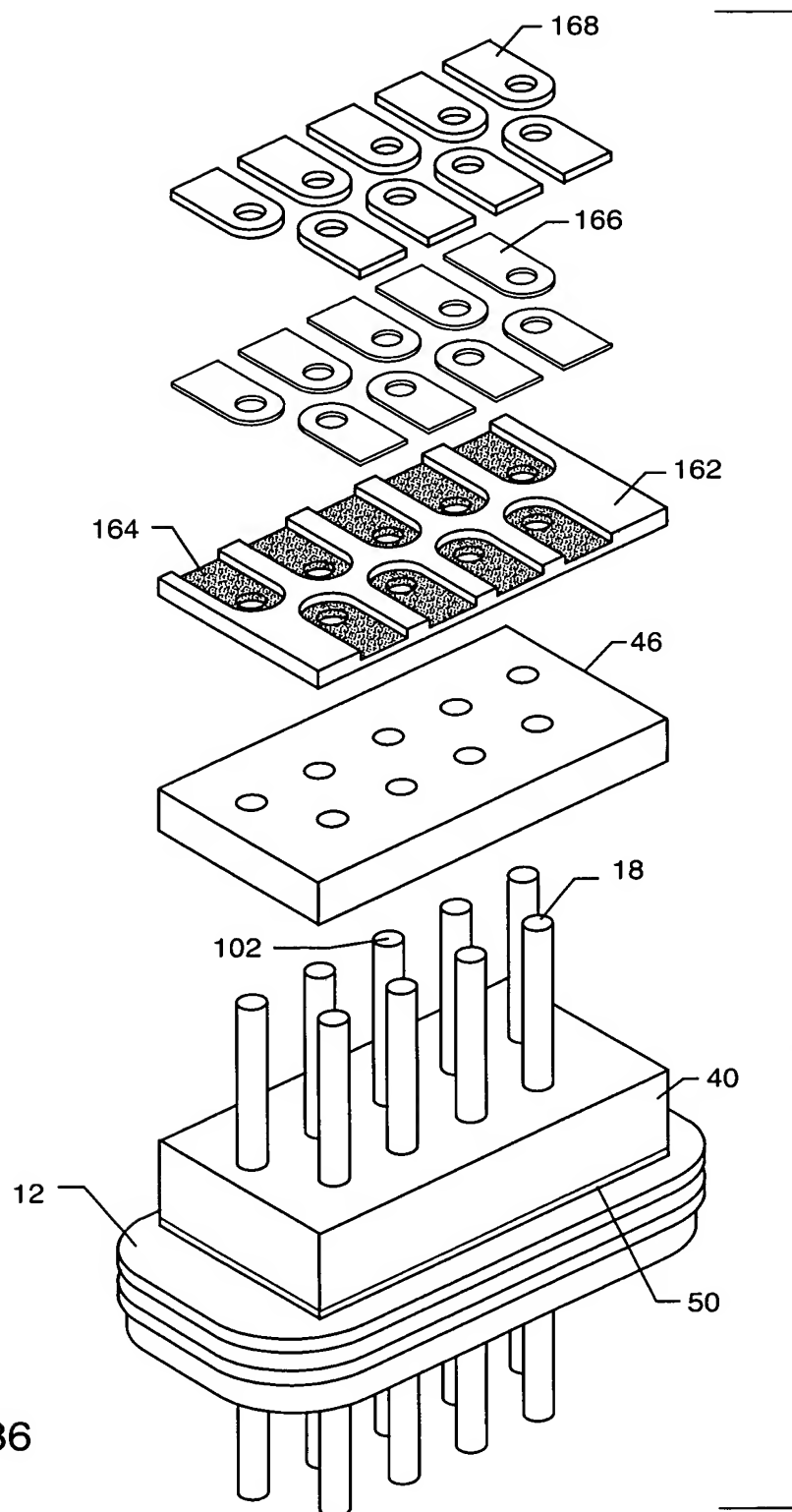


FIG. 86

FIG. 87

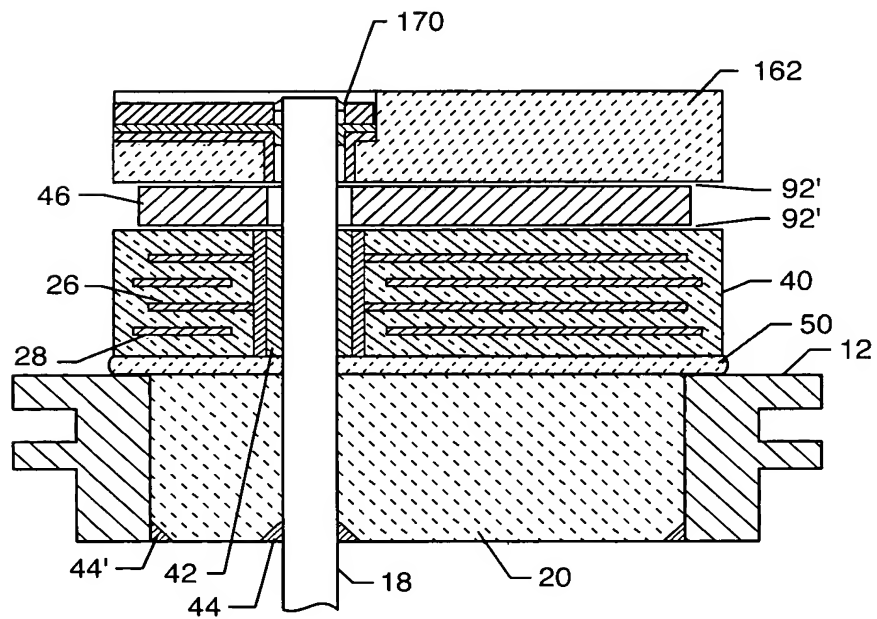
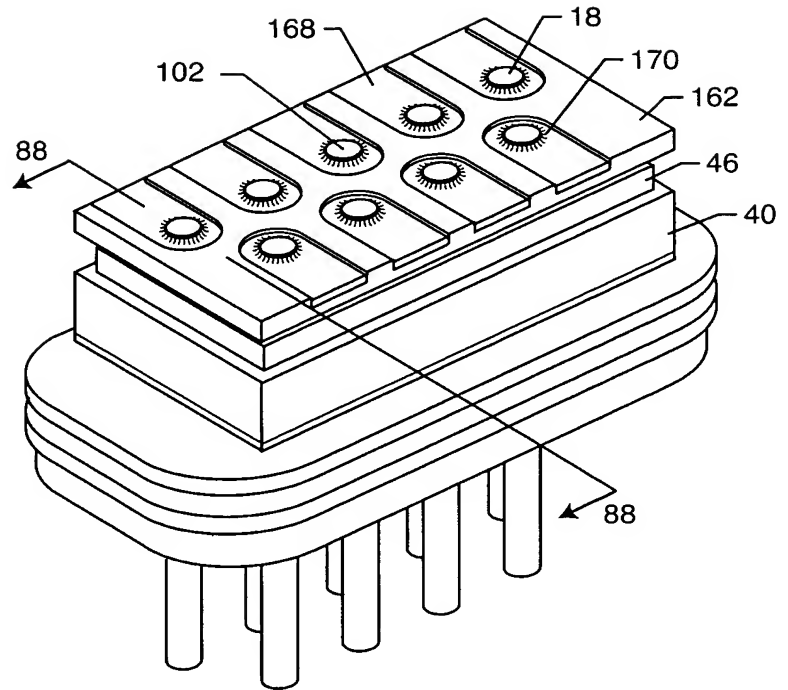


FIG. 88